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PENNSYLVANIA ANGLER

BIRD LIFE ALONG THE STREAM

(SEE PAGE 10)

JANUARY, 1940

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OFFICIAL STATE PUBLICATION

PENNSYLVANIA ANGLER

JANUARY, 1940
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by the

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Vol. 9. No. 1

PENNSYLVANIA ANGLER

JANUARY 1940

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EDITORIAL

To The Sportsmen of Pennsylvania

WE extend our sincere appreciation to the 400,000 licensed fishermen of Pennsylvania for their cooperation during the past year. You have shown a keen interest in your Commission and we have profited greatly by your suggestions, and recommendations. It has not been possible to grant every request which came to the office, nor was it possible to put into effect, all recommendations made. There have been times when some individual or club became incensed because we did not, nor could not grant the request made, but we are a Commission for all the fishermen and do not show favoritism to any group or individual.

The Pennsylvania Federation of Sportsmen's Clubs, the Izaak Walton League, and the clubs who are not affiliated with these organizations, we particularly want to thank.

We have made some forward strides during 1939, a summary of which will be written for the February issue of the Pennsylvania Angler. We will have a complete list of our production and distribution for the year 1939, also our annual financial statement.

We have had a resurvey made of practically all the streams, lakes and springs in this State, and when our program is set up for creating lakes, buying streams and lakes, etc., all the necessary data will be in our possession. In making this survey, we had very valuable assistance from the sportsmen.

At the request of the Pennsylvania Federation of Sportsmen's Clubs, we have made plans to outfit our wardens with uniforms and have worked out a sliding wage scale which will affect nearly all employees of the Fish Commission.

At a very early date we will publish a list of all resolutions passed by the Pennsylvania Federation of Sportsmen's Clubs, at their meeting held February 13, 1939, and the action taken by the Board of Fish Commissioners on these resolutions. As will be shown in the report, we were able to cooperate with the Federation in practically all these resolutions. At an early date our program for 1940 will be submitted to you and we believe it will meet with almost universal approval.

It is our desire to cooperate in every way possible, and we ask nothing more than that we continue to receive the same fine cooperation we have had in the past from the sportsmen of Pennsylvania.

C. A. French
Commissioner of Fisheries

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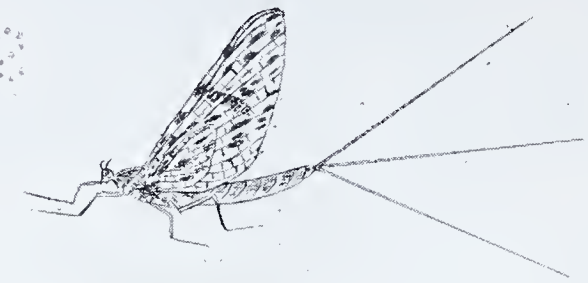
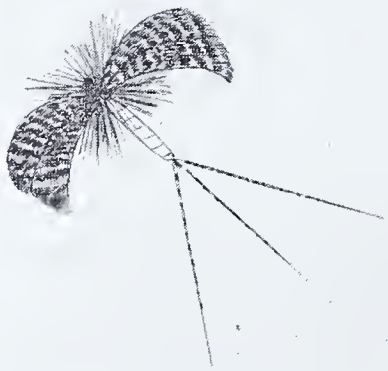
c. 2
Binding

Black Drake



Green Drake

Red Quill



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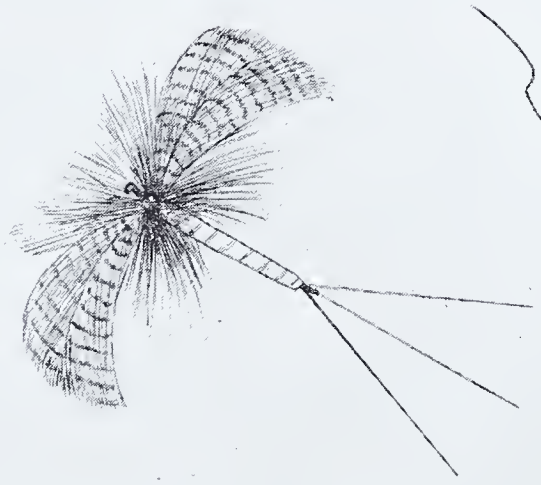
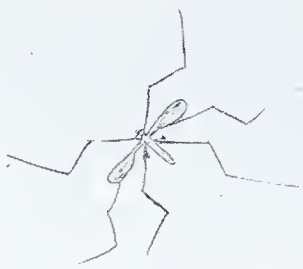


Green Drake

Red Quill



Yellow Spider

Fish Fly

Spotted Sedge

Yellow Spider

Fish Fly

Spotted Sedge

Wetzel 10/39.

RANDOM NOTES ON TROUT FLIES

By CHAS. M. WETZEL

DURING the winter months one's thoughts naturally turn to fishing, especially trout. This is the season when the fly tyers get busy, creating new artificials for the coming year. Some of these artificials will be old tried and true patterns, while others will be close imitations of natural insects that frequent the water.

Looking back over a lifetime spent in fishing, fly tying, and the study of aquatic insects, my most successful artificials proved to be those that were patterned after the natural flies. You have no doubt found it the same, all of which confirms the ancient angling proverb: "When in doubt, match the fly on the water". Sometimes if the truth must be told, the artificial that kills best will be totally unlike any insects abroad, yet trout might see it as a close imitation. An explanation for this seeming inconsistency lies in the fact that its prototype may have been on the water the day before or during the night, and that the trout still retained memories of it; then again the seemingly fancy fly may have a prototype.

Take for instance the well known Pink Lady, accredited to George M. L. LaBranche, author of "The Dry Fly and Fast Water". LaBranche was recognized as one of our foremost angling authorities, and he stumbled on the pattern quite by accident. Like Topsy, the Pink Lady, "just grew", yet I have in my collection, a number of subimago mayflies belonging to the *Stenonema interpunctatum* group-insects, so remarkably like the Pink Lady that even the rankest novice would unhestitatingly identify them as the prototype of this well known artificial.

A year or two ago on Spring Creek, I noticed a number of these subimagoes clinging to the bushes bordering the stream and though none were over the surface, I accordingly tied on a Pink Lady, and immediately started to take trout. These sub imagoes had undoubtedly emerged from the water during the night or the day before; and from the manner in which the fish rose to the fly, it was apparent that they still retained an image or picture of their last meal.

I might here digress and mention that it is the exception rather than the rule when duns or sub imagoes are over the surface, other than at the time when they emerge from the water after ridding themselves of the nymphal skin. This sub imagoe stage is a period of relative inactivity and is passed, with the fly resting motionless on brush and trees bordering the stream. In the absence of any winged flies abroad, it may prove advantageous to investigate the foliage lining the banks, which in the case mentioned above, proved decidedly well worthwhile.

Shad Flies

Sometimes certain mayflies—as in the case of the Shad Fly, *Ephemera guttulata*—rise to great heights, and spend the sub imago stage resting on the tallest tree tops. Naturally in such a case one cannot climb after them, but if there is a stretch of shallow water nearby dotted with small islands, one can usually find a number clinging to the blades of grass immediately at the water's edge. It will be noted that the majority of these insects, especially the females, will be clinging upside down, that is, the wings lowermost. This is probably due to the fact, that the soft and callow female is unable to support her abdomen—heavily laden with eggs—in the characteristic upcurved manner. Undoubtedly some of the Shad Fly nymphs climb up the stems of aquatic plants to affect their metamorphosis, but they do not remain there long, for as soon as the organs of flight become developed, they take wing, and rise higher and higher, until finally they are lost in the tree tops.

The term "Shad Fly" is purely local, and is indiscriminately applied to all the large green and yellowish white may flies, regardless of whether they belong to the genus *Ephemera*, or *Hexagenia*. The two genera may be distinguished from each other by the fact that Ephemera has three tails, whereas Hexagenia, has only two. This is just one of the distinguishing characteristics, and it alone should not be considered sufficient to establish the generic name.

Suppose we first consider *Ephemera guttulata*, for this fly is probably the most common. In my collection I have nymphs taken from Young Womans Creek; sub imagoes and imagoes, from Middle Creek, Penns Creek, Spring Creek, Kettle Creek, Manada Creek, Brodhead, and Fishing Creek in Clinton county; from which it will be seen, that it is fairly common throughout the state. No doubt it is native to many more streams, for it is distinguished throughout Quebec, Ontario and the Eastern States as far south as Tennessee.

Both male and female in the sub imago stage, are known as Green Drakes, and though they differ considerably in size, yet their color is very much alike. Descriptions and imitations follow:

Description, Female Green Drake: Length of body, three fourths to seven eighths of an inch; length of wings, three fourths to one inch; wings, pale green blotched with brownish black, and with a traverse brownish black stripe near center, extending from front border to one half or three fourths depth of wing; tails, three, brown, and about one inch long; legs,—front legs, brown, middle and hind legs, yellowish white; abdomen, brown on the back, yellow on the belly, that is, the fly has brown tergites and yellow sternites.

Imitation, Female Green Drake: Hook, No. 6, or No. 8; hackle, badger, that is dark brown in the center, with white or creamy edges; wings, mottled mallard feathers, stained a pale green; body, natural raffia grass; tail, brown feather fibres.

Description, Male Green Drake: Length of body, approximately, one half inch; length of wings, one half to five eighths of an inch. Balance of description, same as the female.

Imitation, Male Green Drake: Hook, No. 10, or No. 12. Balance of description, same as the female.

The sub imago, after making its way to land, is seldom again on the water until after it sheds the sub imago skin, and reappears in the spinner stage for the mating flight. Depending on the weather, this may not occur until two or three days have elapsed.

When the sub imago is on the water, its body is curved upwards in a characteristic pose, which position is imitated by many fly tyers. An artificial with an up-turned body is hard to tie, and though the fly is a closer imitation, yet it is doubtful if its more realistic appearance compensates one for the extra time and labor involved in tying them. I have tied mayflies for many years with upcurved bodies, but frankly from my experience, the ordinary body has proved equally successful, and it can be tied more quickly.

After the sub imago skin is shed, the fly loses its lethargy, its color changes, and it becomes an animated creature. The mating flight occurs some time after sundown, and reaches its maximum abundance just at darkness. The male fly is now known as the Black Drake, and the female as the Grey Drake. On numerous occasions, I have noticed the Grey Drake flying about with two white, cylindrical, egg packets, extending out about three sixteenths of an inch, from the tip of her abdomen. Whether these flies were injured while ridding themselves of the sub imago skin, or if this is the natural method of oviposition, I am unable to state.

Description, Black Drake: Length of wings and body, same as the male Green Drake; wings, pale golden yellow, but so blotched with blackish brown as to appear black; tails, yellowish, with dark brown joinings, length varies from an inch, to an inch and a half; legs,—front legs—brown and very long, middle and hind legs, yellowish white; thorax, dark blackish brown; abdomen, white. The older this fly becomes, the blacker grow its wings, and the whiter its body.

Imitation, Black Drake: Hook, No. 10, or No. 12; hackle, dark badger; wings, dark teal, stained a pale golden yellow; body, white raffia grass, or sterilastic*—a bandage material procurable at a drug store.

Description, Grey Drake: Wings, pale golden yellow, sprinkled with brownish patches; tails, yellowish, with blackish brown joinings; front legs, brown; middle and hind legs, yellowish white; thorax, brown; abdomen, a milky white; tail, mandarin fibres.

Imitation, Grey Drake: Hook, No. 6 or No. 8; hackle, badger; wings, mottled mallard, stained a pale golden yellow; body, white raffia grass, or Sterilastic*; tail, mandarin fibres.

*Clayton Peter, well known fly tyer, of Lykens, Pa., first sent me a sample of this material, and it can be recommended as ideal for the bodies of the Black and Grey Drakes.

The Shad Fly, that is the Green, Black and Grey Drakes, appear at times in enormous swarms. They usually emerge from the water from the twentieth of May, on up until the end of the month, and are in season, approximately, five or six days. They appear in the greatest abundance about the fourth or fifth day, and the imitation of the female Grey Drake, will probably prove the most successful. This fly is on the water consid-

(Continued on Page 25)

YOUR TORPEDO HEAD FLY FISHING LINE

By PETER J. SCHWAB

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ENDLESS experimentation has convinced me that the fly line is equally as important as the fly rod. In fact, I often find myself wondering if the line isn't just a bit more important than the rod. Certainly it is harder to find a good line than it is to find a good rod.

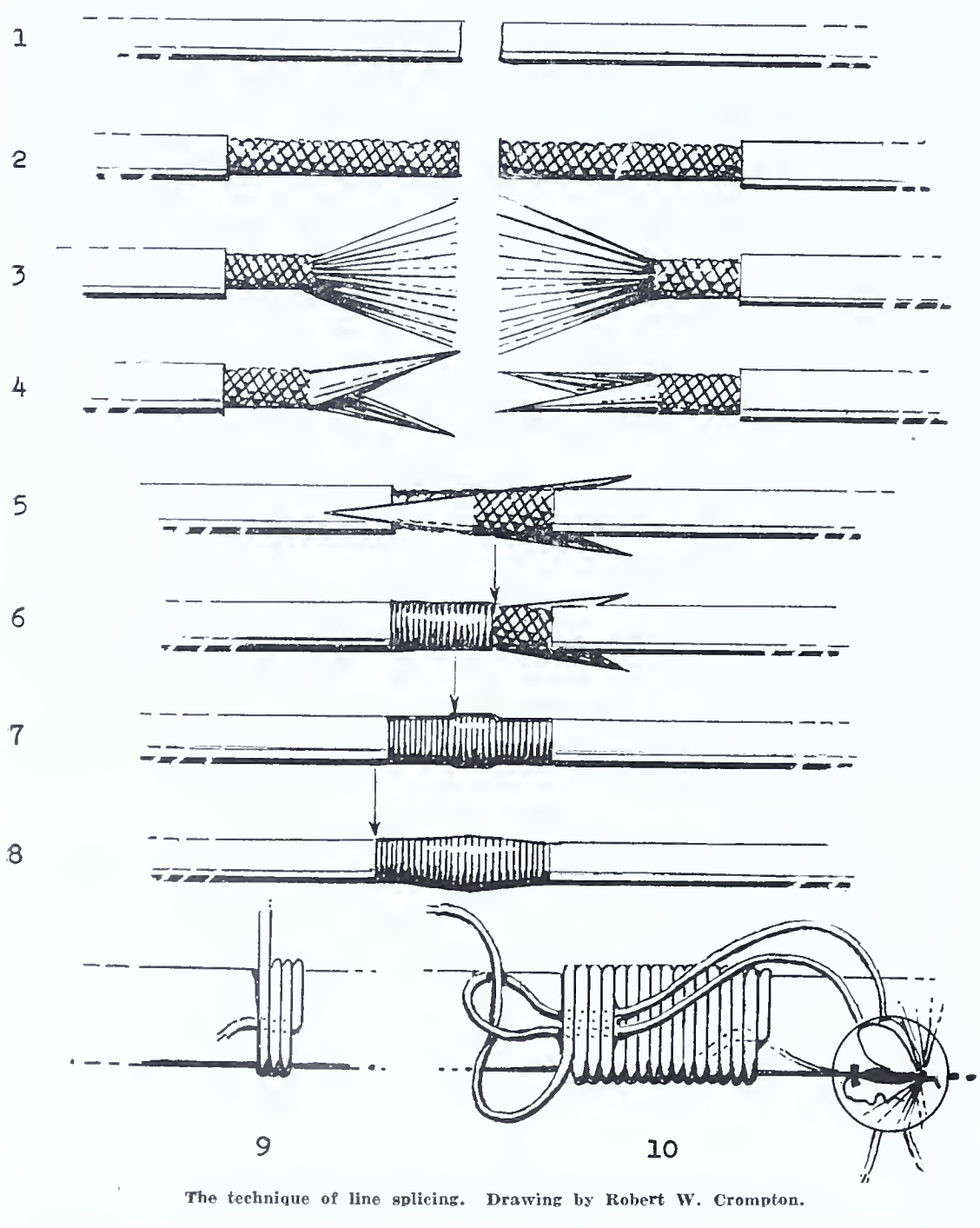
It takes more than money to become the possessor of a line which fits you, fits your rod and fits the fishing. It takes a combination of cash or credit, good judgment—and luck. Right fly lines don't just grow. Rather they are picked up like nuggets or rough diamonds; or, lacking the patience of the prospector, you go about it systematically and *splice your own.*

Real fly fishermen are never satisfied with their casting, but nine out of ten don't know what to do about it.

They revile their rods, calling them cowstails, grapevines, hoe handles. They call themselves rotten casters. They blame the wind and they find fault with the foliage. But the most likely culprit, the line, is seldom questioned.

A good fly line is cast easily and accurately, and it will *float.* It's easier to pick fifty feet of line *off* the water than it is to heave and haul ten feet of line *out* of the water. Seeing that you can't make a good forward cast without first making a good pick-up and backcast, it's obvious that a fly line *must* float. How to make it float we will discuss later.

Double tapered lines are invariably too long in the tip, too long in the taper, and too light in the belly to cast and straighten naturally. They are predicated upon false propositions; i. e., that in order to lay out a delicate cast the line (1) must be thin, and (2) it is cast at the water. Both are wrong. You cast at a spot *over* the water and when the cast has expended itself the heaviest belly will fall lightly, a short taper will straighten of its own accord and your leader and fly will *flutter* to the water.



The technique of line splicing. Drawing by Robert W. Crompton.

To cast easily and accurately the weight must be in the right place; and of right tapers the best are those known as "Torpedo Head" tapers—not "modified" if you please for these are but hybrids between the old fashioned double tapered lines and the true torpedo head.

Despite the fact that the torpedo head is comparatively heavy *out front,* its actual load upon the rod tip is no greater than that of a double tapered line at average casting distance and it is actually less than that of a level line. At the limit of its distance the torpedo head is a much lighter load than either of the old fashioned lines. That's because of its light shooting line, of course. The fly goes out because what weight there is in the line is placed where it belongs—out front, not in the guides or on your reel.

With the torpedo heads you may be certain of another thing. Their latitude is much greater than that of other lines. A light rod will do a fair job with a torpedo head much too heavy, and a heavy rod will do a fair job with a torpedo head which is obviously too light. The first torpedo head you make is almost certain to be a big improvement over anything you've ever used before, and having spliced it in the first place you won't be afraid to cut into it and change it as often as you please and until it suits you, fits your rod and fits your fishing—perfection at no greater cost than a few minutes work.

Such splicing instructions as may be necessary are perfectly illustrated by Mr. Robert W. Crompton's capital drawings.

1. Shows line sections to be spliced.

2. Shows lines after removing dressing and exposing braid, easily done with the back edge of a knife; or *much better,* by rolling under a flat stick.

3. Shows how the braid is teased out using blunt knife or *side* (not the point) of a steel knitting needle or similar instrument. Lay the line on a board; *stroke* it gently and watch the braid open up.

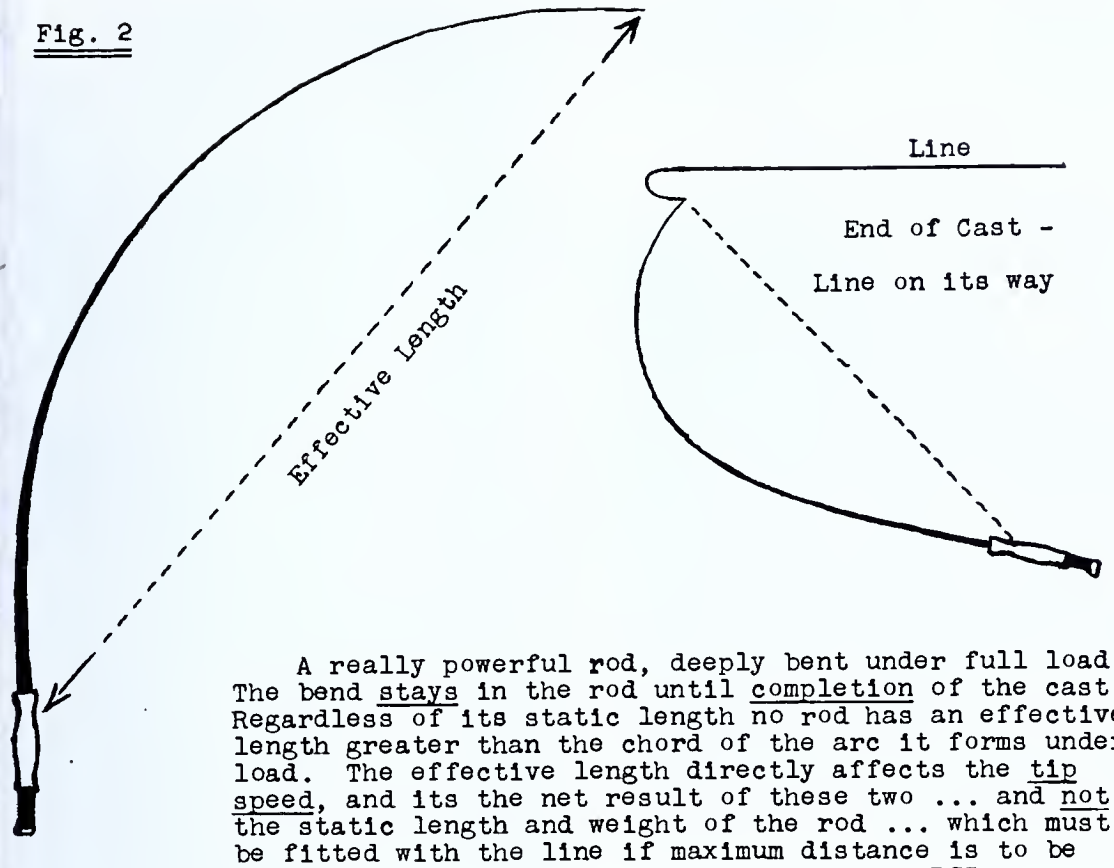
4. Shows manner of forking the line. Mr. Crompton does it dry. I apply a drop of varnish to the exposed braid and stroke it into the frayed out silk, thus saturating the silk with varnish and getting better control of the forks.

5. Shows the lines are brought together with the forks overlapping the exposed braid. Sizes above .060" will make neater splices if forked into three prongs instead of the two prongs illustrated for smaller sizes.

6. Shows first winding which starts at the arrow and winds to end of splice. The fork may be further thinned with manicure scissors as the splice progresses.

7. Shows second winding which starts at arrow and slightly overlaps first winding. *Splices should be kept short, an over-all length of ½" to ⅝" being amply strong with tight winding.* The splice should now be saturated with varnish and rolled under a flat stick to make it smooth and round. Mr. Crompton dries the splice at this point before

Fig. 2



A really powerful rod, deeply bent under full load. The bend stays in the rod until completion of the cast. Regardless of its static length no rod has an effective length greater than the chord of the arc it forms under load. The effective length directly affects the tip speed, and its the net result of these two ... and not the static length and weight of the rod ... which must be fitted with the line if maximum distance is to be obtained. PJS

winding on the final layer of silk. I apply the final winding at once.

8. Shows third and final winding, a single layer covering both the first and second windings. Again varnish, roll lightly and dry thoroughly. (I sometimes use a single winding to secure my splice and finish with a pair of windings, each started at center of splice and tied off at the ends. Once the angler has mastered the simple theory of splicing he will work out his own procedure.

9. Shows how the winding is started.

10. Shows how the winding is finished: ordinary rod winding procedure. Winding over the end of the thread secures the start. To finish, lay a loop of size B or C silk on the splice as shown in figure 10. Make four or five turns over the loose sides of the loop. Slip the end of winding silk through the open loop. Catch the whole under ball of thumb and first finger. Pull carefully on loose ends of loop to pull both loop and end of winding silk through coils of winding. Draw tight and cut off close with razor blade. Varnish splice, roll lightly and dry thoroughly. Apply further coats of varnish only as necessary to cover the splice with an unbroken film. Too much varnish increases the bulk of the splice and its stiffness.

I prefer to use light yellow silk, size 00 or 000, for my first winding, and finish with size 000 or 0000 black silk making a very smooth job. By using two colors I can see distinctly what I am doing. For invisible splices use light yellow or white silk throughout.

The various sizes of lines can often be purchased in short "mill ends" direct from one of the line manufacturers. The front or business end of the line should be the best you can afford. Same for the holding or pull line, but the running or shooting line had *better* be one of the cheaper lightly dressed enameled lines sometimes called "oiled silk" —the kind Grandfather used. This will shoot better than enameled line and it isn't so likely to set into springy coils from storage on the reel.

The winding silk can be had from any dealer in fly tying supplies You *could* get along with the 00 silk commonly used for rod winding, but the finer sizes make neater splices, are just as strong and just as cheap. Use any good rod or elastic varnish, but see that it is reasonably fresh. Old varnish dries too slowly and lacks some of the necessary adhesive and cementing properties of fresh varnish.

Now for the specifications of a few torpedo head tapers!

Extra Light Trout. Designed for dry fly fishing on small streams where the casts will average 15 to 25 feet and will rarely exceed 50 feet. The rod indicated is a light, high grade 7 or 7½ footer of dainty but brilliant action, *not* the usual stocky 7½ footer which is made by cutting 1½ feet from the butt end of a 9 foot rod. The latter will be stiffer than the original 9 footer and will handle a heavier line than the 9 footer.

Tip, 2 feet .030"; front taper, one foot *each* .035", .040" and .045"; belly, 10 to 15 feet .050"; rear taper, 2 feet .045", 2 feet .040"; holding line, 15 feet .035"; shooting line, enough .025" to fill reel.

Light Trout. Designed for dry flies or small wet flies, nymphs, etc., on streams where the casts will average 15 to 30 feet and will rarely exceed 60 feet. The rod will usually be a 7½ or 8 footer of brilliant action, not actually stiff.

Tip, 2 feet .030"; front taper, one foot *each* .035", .040", .045" and .050"; belly 12 to 15 feet .055"; rear taper, 3 feet .045" (or, rear taper, one foot each .050", .045" and .040"); holding line, 20 feet .035"; shooting line, enough .025" to fill reel to capacity.

Medium Trout and Bass. Designed for dry flies, wet flies or bass bugs on open streams or lakes where the casts will average 20 to 40 feet and will rarely exceed 70 feet. The rod indicated will usually be anything from a snappy 7½ footer to a medium 8 footer, or a longer rod of softer action, all having about the same effective length. (See "Fitting the Rod", under NOTES following specifications).

Tip, 2 feet .030"; front taper, one foot *each* .035", .040", .045", .050" and .055"; belly 12 to 15 feet .060"; rear taper, 2 feet *each* .050" and .040"; holding line, 20 feet .035"; shooting line, enough .025" to fill reel to capacity.

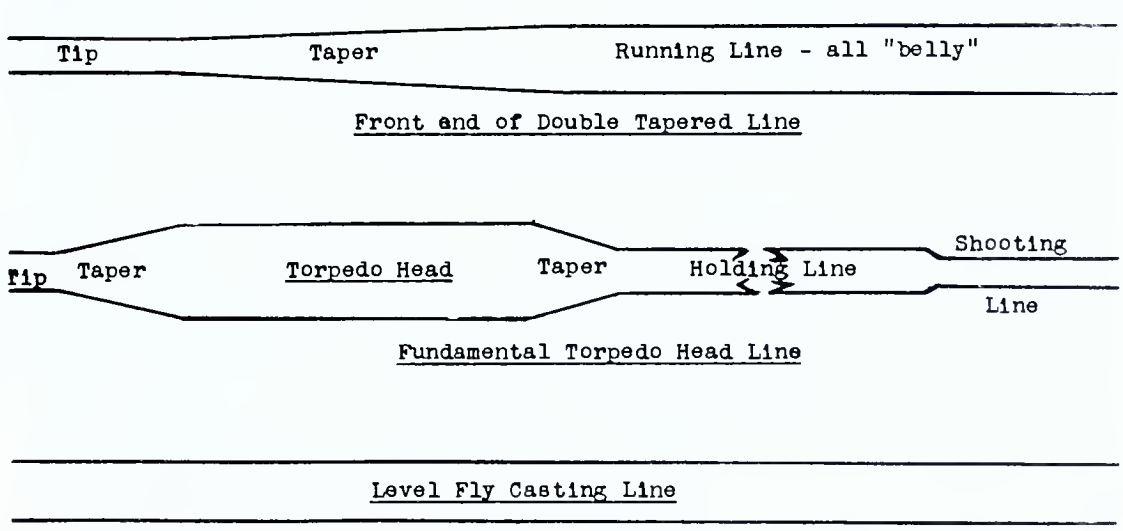
Note: For bass bugs use a belly of 15 feet or longer if the rod will carry it well.

Heavy Trout and Bass. Designed for casts which will average 40 to 60 feet and will rarely exceed 80 feet, or to take the place of the next lighter on windy days. (This applies equally to the *Medium* and *Light* lines—use a heavier line on windy days if the rod will carry it well). Mr. Crompton and some of the tournament casters use much heavier lines at times but you must know how to cast before you can use them. Above all you must know how to make them float. Even this line will do a prompt nose dive for the bottom if not thoroughly greased and properly laid on the water.

Tip, 2 feet .030"; front taper, one foot *each* .035", .040", .045", .050", .055" and .060"; belly, 12 to 18 feet .065"; rear taper, two feet *each* .060", .055", .050" and .045"; holding line, 20

(Continued on Page 24)

Outline Comparieons Fly Caeting Lines



The Pirate of Pithole Creek

By Richard Esler

A deep hole, domain of the brown pirates of Pithole Creek.

IT was not until the ascending sun had drenched Pithole Creek in thick golden warmth that the hatch began. Yellow drakes lifted off the surface of the bridge pool like motes of living sunlight, with every trout in the stream treading water to keep up with them. The creek was noisy with feeding fish as I eased into the tail of the pool.

About four rod-lengths ahead of me a broad limestone ledge shouldered up out of the stream-bed to the surface of the pool. A trout was rising steadily out of the deep black pocket on the downstream side of the ledge. The fish was sucking in his drakes quietly. The surface rolled each time he threw his heavy tail against it to retreat into the shadow of the limestone.

I lengthened my line in the air and finally cocked a pretty fly above the sunken rock. The water was so clear that I could see a small trout dart toward the fly, hesitate, and then retreat suddenly. In that instant I braced myself for what I knew was coming. My fly disappeared silently. But the silence ended permanently when I set the hook. The big brown ripped the pool wide open, slashing and twisting and rolling on the surface. He beat the water into a patch of white foam above his rock, then dove sullenly into its shadow and anchored there. My leader was too fine to force the fight; I had to content myself keeping him under constant pressure.

Things had reached just such a stalemate when a thunderous clatter from the adjacent hilltop announced the approach of Dad Martindale. The old man sailed down the ridge road in an automobile of ancient vintage and shuddered to a stop in the middle of the bridge.

"Mornin, Perfessor," the old native screamed above the roar of four pounding pistons. "How're they hittin'? Get snagged on a rock, huh?"

"No, Dad," I shouted. "I've got hold of a nice one, but I can't move him."

The vibration of Dad's venerable engine must have aroused all the devils in the big trout's nature, for he lunged suddenly against the taut line and cascaded out of his hole in a frenzy of foam.

"Holy crickets!" yelled Dad when he saw the broad tail beating the surface. "Hold him till I get there. He's a good un."

He jumped out of his car and slid down the embankment to the creek. The abandoned automobile drifted slowly across the bridge and subsided against a roadside tree with a spurt of steam and a gentle crunch of metal. Its owner was drifting up and down the shore spurting unheeded advice to both myself and the trout.

The fish pounded his great heart out against the tireless bamboo. He drifted docilely downstream to the waiting net. While I put the tape on his nineteen inches and prepared him for the creel, Dad Martindale helped himself to a fresh cud of tobacco.

"Whew!" The old man swabbed his face with a bandana. "He was a good un." He hefted the trout in his hand, squinted closely at its tail-fin, and spat triumphantly. "I knowed it! I knowed it the minute I seen him break water. He's one of the pirates. There ain't many in the creek, but when a feller gets aholt of one, he's got somethin'."

"Dad!" I looked anxiously at the old native. "Did I understand you to say that this trout is a *pirate?*"

"Hee, hee!" Dad creaked with laughter. "No, Perfessor, I ain't crazy. Here's what I mean." He pointed to the trout's tail-fin. "There's two kinds of brown trout in this here creek. One kind has got tails *without* spots, and them's all hatchery trout stocked here every spring. The other kind has got tails *with* spots, like this here fish, and them's all native browns descended from Captain Kidd."

"Dad, come over here under the bridge out of the sun and sit down," I said. "I'm going to get to the bottom of this pirate business before I find myself going fishing with a cutlass and a brace of pistols. Did you say that the so-called native browns in this stream are descendants of Captain Kidd?"

"Yep," declared the old man, "that's what we called him, Captain Kidd, the biggest toughest trout that ever growed a fin. He didn't know no master, that fish. He was a reckless devil, too. Seemed as though he knowed how big he was and jest didn't give a damn for nobody or nothin'. Everything in the creek, dead or alive, was his'n. I seen him snap the hindquarters off'n a muskrat that tried to swim across his pool. He was a pirate, all right, and king of the creek. That's why we called him Captain Kidd."

"Well, what happened to him, Dad? Who caught him? How big was he?" I scented a story.

"Whoa, Perfessor. Fetch up a little, and I'll tell you about him." The old native squirted his chew into the creek and wiped his whiskers.

Dad was always good for a story, but this was one which I particularly wanted to hear. I don't suppose that there is a single trout stream anywhere in the hills but what harbors, or did at some time in the misty past, a monster trout. The fame of such a fish runs quickly from tongue to tongue in the surrounding country, and even if the old lunker is actually caught and measured, it lives on in the tales which it inspired. They are told and retold to generations of trouting folk, become encrusted with an incredible amount of fact and fancy, and lend to trout fishing that mellow air of tradition and his-

Home across the flats of Pithole Creek.

Ideal cover in the upper reaches of Big Pithole.

tory which no other branch of angling has acquired.

"Well, sir," reflected Dad Martindale, "'twas quite a passel of years ago when them hatchery fellers dumped the first can of brown trout in this creek. I was a young buck then, helpin' my old dad run a two hundred acre farm. So for three or four years I couldn't find time to wet me a line more'n once or twice a season. I fished jest enough to find out them little brown minnies from the hatchery had growed up into right nice fish.

"Then one evenin' in midsummer I drove the team down here to water 'em at this pool. There wasn't no bridge then, jest a ford across that there riffle at the head of the pool. While the horses was blowin' and guzzlin' the water, I strolled down along the creek bank. The water was middlin' low and clear, but there wasn't a trout in sight. That was a mite peculiar, I kept thinkin', till I seen a fish slide up through the middle of the pool. Holy crickets! What a fish! The danged thing looked as long and thick as my leg, and I had a right handsome leg then, let me tell you, Perfessor." The old man crackled like an ancient rooster.

"Well, sir, I figured at first it was a whoppin' big sucker, but no sucker that ever swum in this creek had spots as big as quarters plastered all over his skin. I could've counted 'em, every one, plain as plates on the table. The sun had jest dropped behind yon ridge, but the light was good, and I watched him cruisin' 'round the pool like a rusty submarine. He 'peared to be a brown trout, all right, 'cept that his tail was marked with big glarin' spots like the rest of him. I never seen a brownie marked like that afore. And then he was so all-fired big. Perfessor, I've ketched a sight of trout in my time, but I never seen one mounted on a wall nor swimmin' in a creek that was half as big as that old hellion." Dad Martindale spat regretfully into the pool and chewed for a while in silence.

"Well, sir, there wasn't many folks fishin' these waters then, but still and all, I kept mum about the old lunker, figgerin' to get my hook into him afore anybody else in the county knowed about him. As luck'd have it, we had a spell of dry weather right then, and the wheat ripened fast. We worked dark to dark for a week harvestin' and thrashin' to beat the next change in the moon. I got jest about enough time for sleepin', let alone fishin'.

"Well, sir, as I rec'llect, we finished thrashin' Saturday afternoon, and I went to the crossroads store for a sack of lime. I was standin' out by the hitchin' rail jawin' with some of the boys when we seen somebody comin' hell-for-leather up the road from the ford. It was Eph Miller, and he was standin' up in his old spring wagon wavin' what 'peared to be a whip over his black mare.

"Well, sir, Eph always was a kind of excitable cuss, but I never seen him shakin' like he was when he clumb down out of his wagon. And he didn't have no whip in his hand; he held the butt end of his big salmon rod busted clean off at the handle with the reel as empty as a drum. Right away I knowed the cat was out of the bag. 'Though the boys at the store couldn't quite make out from Eph whether he'd hooked a trout, a sea serpent, or somebody's stray bull, they all got their rods and went down to the pool below the ford." The old native cackled again and explained almost visibly as he tasted the memory of those past days.

"Perfessor, I was the first to hook him agin, right under that there ledge where you got your trout a spell back. Well, sir, I've shoed more'n one ornery horse, but, shucks, that was like goin' to Sunday school 'longside the ruckus that big brown kicked up. I was luckier'n Eph, though; I only lost my line.

"The next few years sure played hobs with the fishermen 'round these parts. Some of 'em hooked the big feller, but nary a one of 'em got to first base when it come to landin' him. I've seen him with enough hooks in his jaws to start a hardware store. He was the nerviest critter in these hills. When he wasn't feedin' he patroled his pool in plain sight, jest as independent as a hog on ice. He wouldn't tol'rate another sizeable trout anywhere near his waters. Either he killed 'em off or he druv 'em away.

"Well, sir, somebody, I don't rightly rec'llect jest who, christened him Captain Kidd after the famous pirate, and the name seemed to suit right good. 'Twasn't long afore the whole county knowed him as the Captain. Some of the boys got proud of the old coot and never fished for him. You could ketch sight of him 'most any time you druv across the ford. Every year he got bigger and tougher and harder to hook."

Dad Martindale paused impressively. He looked solemn as he said, "Perfessor, nobody ever ketched that fish. For years the best fishermen in these parts was after his scalp, but nary a one of 'em even come close. Then one evenin' I druv the horses down to the ford, and the pool was full of risin' trout. But the Captain was gone."

"What happened to him, Dad?" I asked.

"Well, sir," said the old man. "I don't rightly know. But there's some folks that say he's still here in Pithole Creek somewhere. There's some almight deep holes in these waters. Anyhow, ever since Captain Kidd's time, we've been ketchin' brownies marked the same as him, like the trout you got in your creel right now. You don't hook one of the pirates every day in the week, but when you do he's a big trout, 'though not so whoppin' big as the Captain, and he's a tough customer like the Captain, too."

Dad Martindale got up and stretched himself like an old gray cat in the sun.

"Perfessor," he said as he clambered up to the bridge, "you jest try them big holes on up the creek. Mebbe you'll get aholt of a *real* pirate up in them waters."

As the clatter of Dad's automobile faded behind the hill, I started up the creek, my mind full of the old man's story. I knew that he believed the Captain still haunted some deep spring hole in the creek, although his better sense would not allow him to admit

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One of the "pirates" of Pithole Creek.

SO-O-O BIG

By ELWYN A. NELLIS

YOU can always tell a fisherman—but you can't tell him much. He can tell you plenty, though, and usually does. He will tell his brother anglers and his wife, his friends and his enemies; in fact, he will tell almost anyone who listens and sometimes those who won't. He will prevaricate, exaggerate, boast and brag and even tell you that he is not enough of a liar to tell you the truth.

Be that as it may, Waltonians the world over possess something the uninitiated and the uninformed will never have. They not only have a sport, a method of relaxation from the humdrum cares of the world during the fishing season, but they are also endowed with a common ground upon which all can meet during the long winter months.

As they huddle around the kitchen stove, snow swirling against the window panes and icey "ahems" filtering from the living room where friend wife has taken refuge from the thick, blue fog which fouls the air, they smoke and relive those moments when the cares of the world were someone else's worries.

Memories of close comradeship which can only be cemented by the aroma of boiling coffee and frying bacon in the awakening day are recalled; those moments when, while gulping down the hot amber liquid, all are possessed with the same fixation—to fish. Memories of those evenings, too, when yarns and tobacco were freely swapped around a campfire, are brought back, reverenced as only fond memories can be, and then replaced.

Even though we fishermen enjoy such reputations, which, incidentally, bothers us not in the least, I have had enough experiences in the realm of the "impossibles" to know that, incredible as they sometime seem, those "fish stories" which anglers are continually recounting, are generally founded upon at least a grain of truth.

In substantiation of this contention I would like to recall several "incredibles" which have happened to me in my ten or fifteen years of fishing. In spite of a fisherman's natural tendency to permit his imagination to run away with him, I will strive to stick to the facts in each case, even though some are shrouded in antiquity.

Who's Who

When one man catches two bass on the same plug at the same time there is never any question to whom they belong. But when two men catch one pickerel on two baits at the same time—who's who?

My brother-in-law and I haven't settled this question yet. Last year, while fishing for pickerel on Lake Minisink, both of us caught the same fish simultaneously. In view of the fact the fish swallowed his bait firs my brother-in-law claims the fish was hi On the other hand, it is my contention th since I not only had a hook in him but lande him with the net as well, the fish was min To settle the question we put him back. H was only twelve inches long anyway.

We had been fishing for some time wi no luck to speak of, each with two poles the water and all four hooks baited wi shiners.

"Oh-oh", my brother-in-law expostulate "something is fiddling with my bait".

Abandoning my lacidaisical attitude watched his bobber slowly move away in th direction of one of mine, stopping about foot away.

"He's eating it", he said, making ready hook him.

"Wait a minute", I implored, "there's o after my bait now and if you start messi around with yours, I'll lose mine".

"Can't help it. This fellow has gone t long already".

"No. Look!"

Our bobbers had come together and, si by side, were moving away.

"What is this, a love feast?" my brothe in-law asked.

"Search me, but let's go".

Simultaneously we struck and started bring our catches in. There was some figl but not what either of us had expected. The we saw why. Both of us had hooked th same fish and the poor pockerel was bein pulled two ways at the same time.

A New Wrinkle

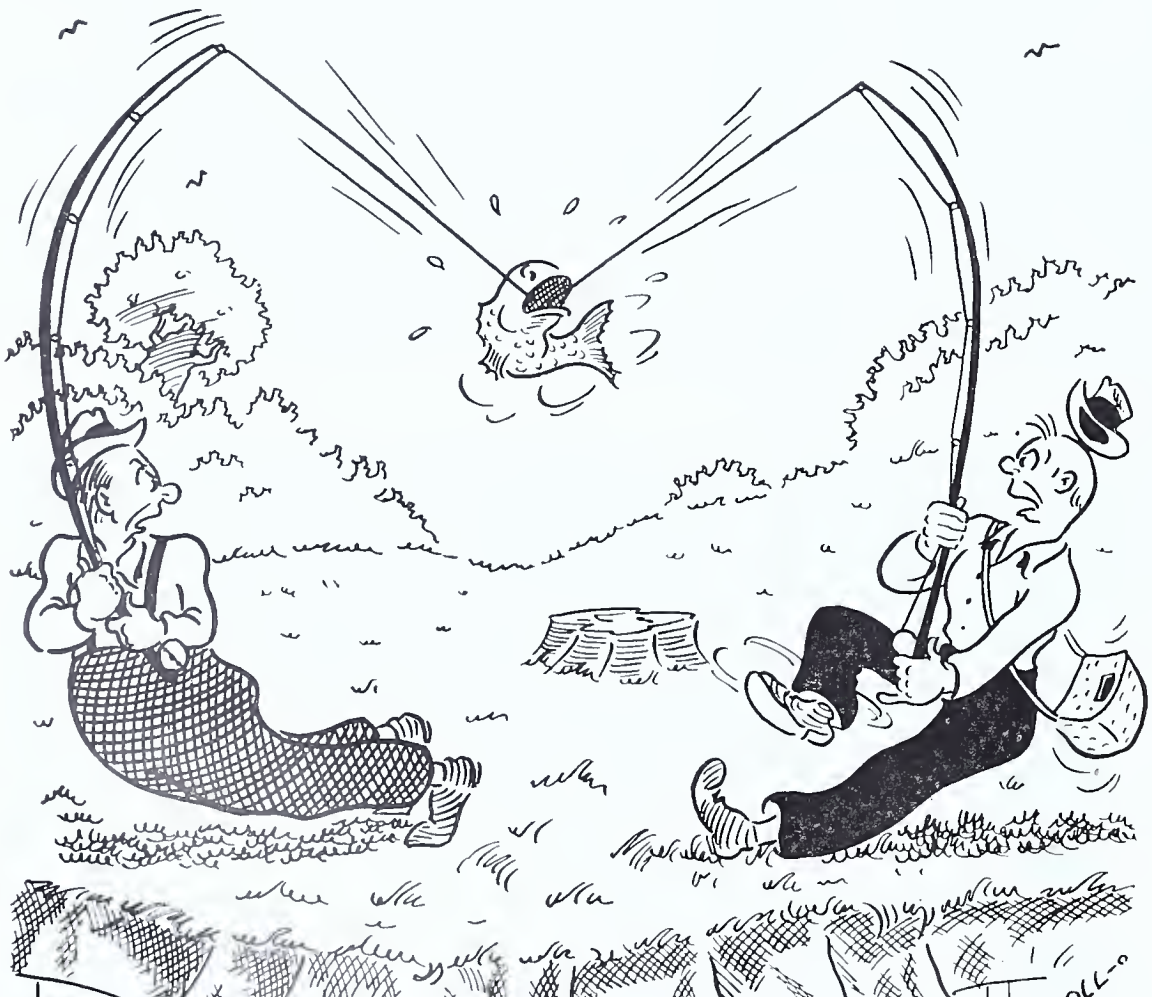
This may be an old story to some bu it is a new one to me.

I have a friend who is, beyond a doub the most ardent fisherman I have ever see Invariably, from early spring to late fall, h fishes all day Saturday, Saturday night, Su day and part of Sunday night. Neither rai snow or blistering heat will drive him fro his pastime. He sleeps in his car and ea from an enormous package of "lunch" whe ever he is hungry.

He fly fishes, bait fishes, casts, still fish and trolls. In fact, he is not only a ferve angler but an accomplished one as well. H uses one method until he becomes tired until it becomes monotonous; then he tri another. Sometimes, for the sake of diversio he makes up lures and other artificial ba to try upon the unsuspecting fish, and the conceives new methods of using them.

In this vein, sometime ago, he discovere a new use for the lowly night crawler. H affixes a huge gob of them on a hook an lets them drag along behind his boat, whethe he is trolling, fly fishing or casting.

His results have been stupendous. Th bass and pickerel caught are more or less t be expected. One can even conceive of few perch and even sunfish and bluegil from time to time. But you should see th bullheads he has caught! The largest on tipped the scales to three pounds and fou ounces. It is a habit now that whenever h



When two men catch one fish on two baits at the same time . . . who's who?

wants a mess of bullheads, he goes out trolling for them.

Bass Fishing For Suckers

One day, several years ago, my wife and I were enjoying a day's bass fishing on Beardsley's Pond, an artificial lake in the central part of New York State. The lake, which has been in existence for only about ten years, is infested with stumps, old trees, fences and the like. It is fed by the East Canada Creek, a stream notorious for its bass and other fish.

We were working our way back and forth across the inlet of the lake, hoping to hook into a bass intent upon securing his feed as it was washed into the lake by the stream. Jeanette was using a Colorado spinner while I was doing my share with a june bug spinner and buck tail fly. Suddenly my wife's spinner was stopped dead in the retrieve.

"Snagged", she guessed.

It was the most peculiar bit of snagging I have ever seen, however, for even though she relaxed her rod, the line remained taunt. Then her reel began to slowly unwind and her line to gradually travel upstream. Fascinated, we watched while the line continued its slow, steady travel away from us. Suddenly it gave several violent tugs and headed for shore.

"Give it to him", I kibitzed.

Jeanette struck him hard and—nothing happened. The line merely headed for the other shore.

"Here goes", she said, and started to reel in. Her catch, however, was of a different mind. So she tugged and I rowed and the distance between us and the monster on the end of her line was gradually shortened. Once the line went slack and we were certain he was gone. My wife rapidly reeled in and was about to lift her spinner from the water when her rod bent almost double. The surface of the water began to boil. Hastily I reached for the net for I saw he was a big fellow, whatever he was. I swooped under her prize with the landing net and dropped, not a bass, but a nineteen inch sucker at her feet, taken fair on a Colorado spinner.

Eyebrow Fishing

I am more or less partial to Colorado spinners, having taken some fine catches on them on several occasions. Since my wife caught a three pound sucker on one I am also convinced that they are versatile. As with my wife, I, too, had a very peculiar experience with one a few years back. However, where my wife has me to vouch for her, I was alone at the time I made my miraculous catch. Furthermore, her fish was taken fair and square, whereas mine was fouled.

I am rather reluctant to tell this story for, from past experiences, I know what to expect; politely muttered "heh-heh's", fishy stares, and a quick exchange of subject. The moral is, never go fishing without a witness.

Nevertheless, it is true that I landed a three and a half pound smallmouth bass by his eyebrow.

It was late one afternoon during the fall of 1933 or '34, I believe. I had been casting all afternoon from the shore of Water's Mill Pond in the southernmost part of the Adirondack State Park in New York State with absolutely no luck. The bass and pickerel were just not feeding.

"I recall one night when it seemed the fish would jump in one side of the boat almost as fast as I could put them out the other".

Then I had a strike. Or was it a strike? No fish had ever behaved like that before. The lure came to a sudden stop and then cut loose at a terrific speed, describing a perfect circle about ten feet in diameter. All I could do was to stand there, mouth agape, watching the crazy antics of the line.

I had not the slightest conception of what I had for nothing poked its head above the water. It just went 'round and 'round. About the eighth trip round, as nearly as I can judge, it hit the middle of the circle and went straight up in the air. That bass, for it was a bass, shimmied, shook and danced before returning to the water.

If you think I had an easy time landing him, try pulling a submerged board through the water broadside and you'll have some idea of how that fish was acting. He was perfectly willing to go either to the right or to the left, but never straight ahead. Gradually he lost his fight, though, and I netted him in about a foot of water.

Upon examination I discovered that one of the hooks on the single gang had pierced the skin just above the eye. It has always been a mystery to me, with so much thrashing about, that he didn't pull himself loose. It was certainly no skill on my part which kept him fast for I was too busy watching him to do anything other than hold onto my rod. There was no indication that he had been hooked in the mouth, or any other place for that matter, and I have an idea that the spinner hooked him as he was lying motionless on the bottom. I took no other fish on that trip.

Fly Fishing

Everyone has heard the story about the bass which snared a plug in mid-air just before it struck the water. I had one do just the opposite last year on Blanding Lake. It was not a plug he snagged, though, but a live fish, and it wasn't just before it hit the water, but just after it left the water.

I was still fishing with shiners at the time and had been blessed with a fair amount of success. In order to relieve the monotony I was dangling a small hook to which I had impaled a piece of worm, over the edge of the boat, hoping to catch a sunny or a perch.

I caught one or two small ones which I put back and was just pulling up my third when I was scared out of a year's growth. Only a fisherman can appreciate the split-second timing which a bass has. If an outfielder could pick off a fly ball as neatly and with the same precision as that bass nailed my sunfish, his name would go down with the immortals in baseball.

In gobbling up the "fly ball", however, he hooked himself and the line whistled through my hands, blistering them. I had been using a hand line and when it burned my fingers, I let go. He stripped out all I had and kept right on. For all I know he is still going.

Beginner's Luck

I have always been under the impression that a red-headed plug, no matter the variety, is for late evening and nocturnal use. However, one day last July I received the sur-

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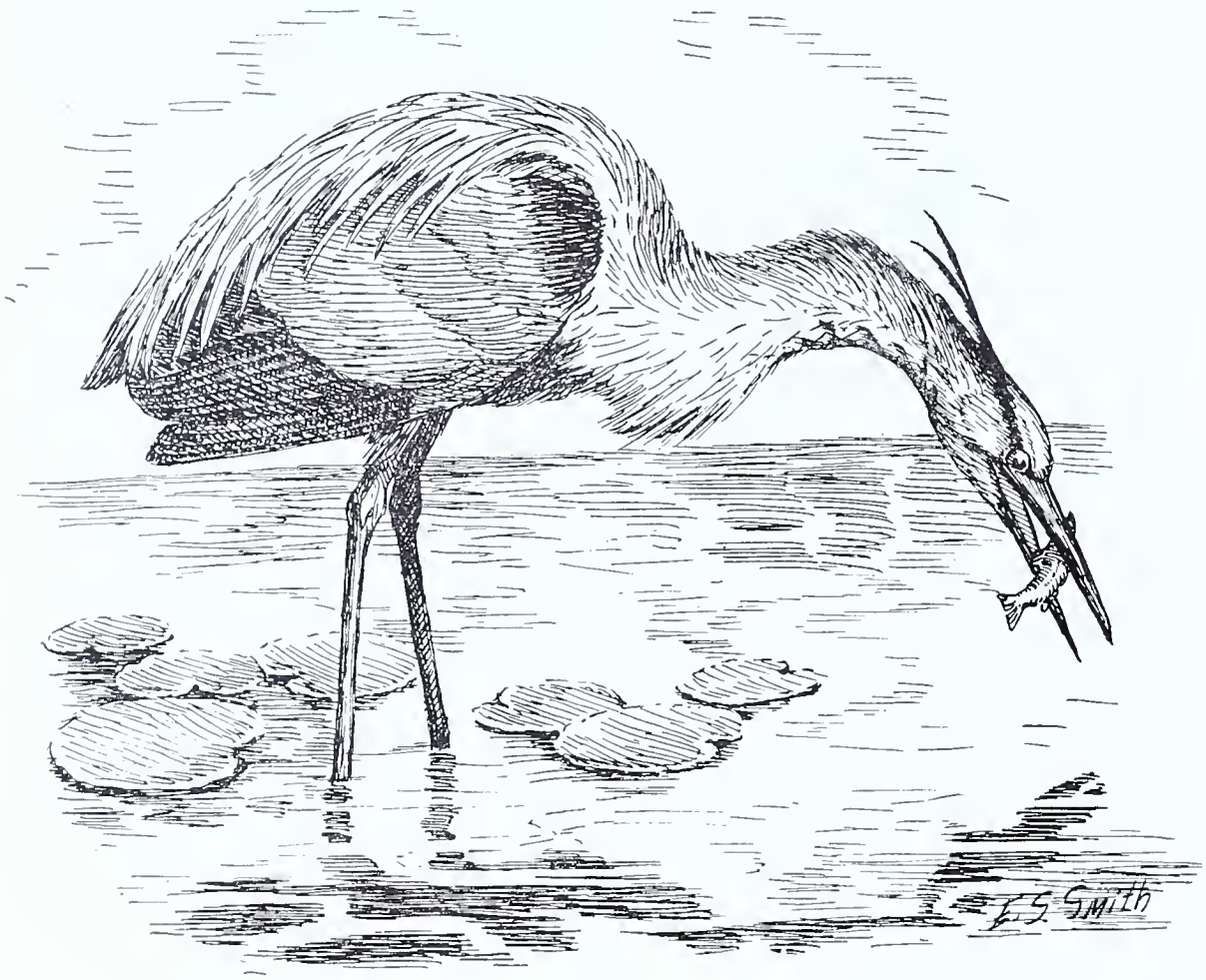
BIRD LIFE ALONG THE STREAM

E. STANLEY SMITH

Front Cover Illustration by the Author



HOW often, on your fishing trips, have you seen birds which were complete strangers to you? Perhaps you have observed the same birds on different occasions, yet knew little or nothing of their habits. On the front cover of this magazine you will find a painting of the species most commonly met with by anglers. Below, I have arranged a short description of each bird which might aid in identifying him. It is the purpose of these descriptions and the color plate to add more enjoyment to your outdoor ventures by helping you to know and understand your feathered neighbors and their relation to you.

No. 1 Blue Jay

This mischievous fellow, in spite of his annoying ways and his habit of destroying eggs, is well liked for his beauty and abundant sense of humor. He delights in frightening small birds with his imitations of the call-notes of hawks.

No. 2 Phoebe

The Phoebe sits on a small limb until some luckless insect flies too near. Then, with startling rapidity, it darts out, snatches the insect, performs a few stunts in mid-air and returns to its perch to wait for another. It usually builds its nest under a bridge or at some other sheltered place.

No. 3 Hairy Woodpecker

This active fellow can be distinguished from the Downy Woodpecker chiefly by his larger size. His loud tattoo is a well known sound.

No. 4 Cardinal

Thicket bordered streams attract this well known bird. It is here that he and his dull colored mate build their nest and rear their young. His song is a loud, clear whistle.

No. 5 Towhee

Although most of his time is spent on the ground scratching among the leaves, the Towhee occasionally flies to a conspicuous perch and sings out a monotonous repetition of his name.

No. 6 Song Sparrow

A beautiful and indescribable medley of warbles and trills is the song of this happy songster. He is often found on shallow streams, hopping from stone to stone across the water.

No. 7 Brown Thrasher

This large bird haunts the thickets along streams and is usually very retiring. When singing, however, he chooses a high perch for his fine performance.

No. 8 Catbird

Its cat-like call has given the catbird its name. It is an accomplished singer, and has an endless variety of warbles, chirps and trills.

No. 9 Maryland Yellow-throat

When this tiny bird is not peeking out at you from the depth of the bushes with his beady black eyes, he is singing his distinctive song, "wichity, wichity, wichity". This song is probably his best known characteristic.

No. 10 Wood Thrush

During the heat of the day the Wood Thrush is quietly searching the ground for beetles upon which he feds. When evening comes he changes completely. It is then that he begins his clear, flute-like song which has made him one of our most famous songsters.

No. 11 Great Blue Heron

When you see a large, long-legged, blue-grey bird standing perfectly still in the shallow water of a stream, you have seen the Great Blue Heron. He is indeed one of the most patient of fishermen.

No. 12 Little Green Heron

This little heron has much the same habits as the Great Blue Heron, but it is more solitary. Like others of its tribe, its food consists mainly of fish and frogs.

No. 13 Belted Kingfisher

Watching from a convenient perch above the water, the Kingfisher drops skillfully upon his prey and snatches it from the water with his long bill. Fish, frogs and an occasional reptile form the greater part of his diet.

No. 14 Red-winged Blackbird

This scarlet shouldered bird and his brown colored mate nest in the marshes and swamps. The male has a loud, liquid song.

No. 15 Woodcock

Being a nocturnal bird, the Woodcock is not often seen feeding during the day, but is usually flushed from his daytime retreat. His long, slender bill is well adapted to probing deeply in swampy soil for worms.

No. 16 Spotted Sandpiper

This small, long-legged bird is well known because of his peculiar habit of bobbing his head and tail up and down in a rather nervous manner. He is found on the shores of rivers and lakes.

No. 17 Killdeer

The Killdeer is often flushed from meadows and fields as well as shores and beaches. At such times it rises on slender, pointed wings and utters its call; an excited repetition of its name.

Mrs. Stubblefield—What did the minister say this morning?

Mrs. Zimpir—His sermon was about the Garden of Eden. I don't think he was very nice about it either. He reminded his congregation that Eve did not realize that she lacked clothing until she ate the apple—and then he looked right at some of us young women and said: "Sometimes I wish some of the women in this church would eat an apple."

DRAGONFLIES FOR SMALLMOUTHS

By H. B. WAGNER, Jr.

MY first use of artificials for smallmouth bass started with small homemade wooden plugs attached to spinners. These lures did produce some nice catches but were awkward, heavy to cast, and did not appease my desire for more consistent catches.

The next creation, a rubber legged affair, proved its worth in one season's use but fell short of what I had hopes of accomplishing. This lure, however, did provide the initial idea for tying a dragon fly which accounted for some fine catches of bass during the 1939 season.

While fishing the rubber legged lure I noticed many fish struck just as the lure hit the surface of the water. Also, on bright, clear, hot days during which many dragon flies moved about over the water dipping here and there, many fish were taken on surface strikes.

From these observations I concluded that to tie a representation of a dragon fly should be the answer to my search for a more productive lure. The first fly was a complete success and took eleven bass the first day it was used.

From this point I took up the question of fishing this lure effectively under varied water and weather conditions. During first trips astream, the waters were low, clear, high in temperature, and the bass were extremely wary and easily disturbed.

One impressive afternoon spent on a local stream (Lebanon County) taught me enough to continue taking fair catches all during the drought period. The first spot fished on the particular afternoon was well supplied with bass, as could be seen by their feeding activities. One small bass was the net result of a hard half hour spent casting over the pool. At the end of that time I waded out of the water rather disgusted and sat down to rest. Four or five minutes later, the surface of the water exploded and minnows jumped desperately in all directions to escape the open jaws of a fair sized bass. From that time on, every few minutes, bass would make a rush for minnows or snap savagely at a low flying dragon fly. These performances moved me into a deep thought (strangely enough) at the end of which my mistakes were quite apparent to me. First of all, I had approached the pool clumsily and conspicuously. I had disturbed the water by wading and my leaders were pitifully short under the low, clear, water conditions. With these thoughts in mind I followed the same procedure of fishing the pool as before, and succeeded only in making the bass retreat to a far corner of the pool. Satisfied that I was on the right track, I moved on to the next spot following the reverse methods to those used on the first one. Studying the stream for a few seconds and deciding on a casting point, I made my way to it with the least possible disturbance. Next, refraining from any wading whatsoever, and changing from a six to a twelve foot leader. Within an hour without moving from the spot, I took nine healthy, scrappy bass, two large fallfish, and lost one nice bass, to which an amusing story is connected.

This bass, a broad fifteen inches, after breaking the leader, gave me an interesting display of aerial acrobatics. The fish struck the dragon fly in a savage rush just as it struck the surface of the water. With a quick, hard jerk, I set the hook. After a few fast runs, the leader parted, and Mr. Bass was free. The imbedded hook must have disturbed him greatly, for in the next few minutes he jumped out of the water eight or ten times. Each time he jumped shaking himself like a wet dog, the fly and a piece of leader could be seen hanging from his jaw.

With the breakup of the drought, came high and discolored water, which again necessitated a change of tactics.

My initial try at fishing under these water conditions was doomed to be a failure, had I not remembered color contrasts. Color contrasts, by the way, were brought to my mind by an expert fly fisherman and fly tyer friend about four years ago at the Spring Creek Project.

At any rate, after fishing my favored brown dragon fly for twenty or twenty-five minutes and deciding it blended too well with the water to be easily seen by the bass, I switched to a black one and allowed it to sink considerably on the first cast. While retrieving it very slowly, I felt a quick hard tug and the next second was fast to a nice bass of about ten inches. This method is, of course, slower, and the fish are harder to hook, but it does bring gratifying results in dirty water.

Up to this point the reader may have gotten the idea that the writer is a "crackbrained" fisherman who thinks he has developed a super infallible lure. The "crackbrained" idea is probably not far from correct, but in all fairness to the lure, it is honestly by far the deadliest lure I have ever used for smallmouths. Several friends also agree upon this point.

It has often been said, with much truth, that the best lures can be, and usually are failures if the user is unable to present them properly to the fish.

This idea is comparable to the fellow who depends too much upon his gun and not enough upon himself to fill the game bag. Closely related, and interlocking with presentation of the lure, are the two factors of tackle and stream practices. An analysis will be more explicit.

A tackle discussion would be perhaps the appropriate starting point for such an analysis. Without tackle topics, those preseason trout discussions would not be so alluring or interesting to the cronies gathered in front of fire places and in feather littered rooms.

After what has been already so often said about the need of a powerful fly rod for bass, it seems hardly necessary to say more than a few words on this subject. Lest we forget what has been said: Don't use your pet lightweight fly rod for bass! This advice, as many have learned and will learn, is for the good of both the rod and the owner's bank account. Briefly: a typical bass rod should be at least nine feet in length, weigh not less than six ounces, and have a rather stiff action throughout the whole rod.

Fly lines have long presented problems to both the expert and beginner at fly fishing. Since the appearance of the oil finish lines, however, the expert is able to fit his rod with a line which will bring out its power and action. Many beginners not having the experts' experience are not so fortunate. Often they lose sight of the fact that the lines must be heavy enough to make the rod work. Unfortunately too, we have many cheap oil finish lines on the market which are correspondingly hard and stiff. Possibly the best way to steer clear of such pitfalls is to ask an experienced fly fisherman for his advice. If you do not know such a person, he can easily be found along many of our streams. When you do meet him, nine chances out of ten he is using good tackle (not necessarily expensive tackle) and can tell you where, what kind of, and how to get the proper equipment.

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A 17 inch smallmouth taken on an artificial dragon fly by the writer.

JUNIOR CONSERVATION

By C. W. STODDARDT, Jr.

SEVERAL years ago a group of young fellows were organized in the State College High School, into what was called a "Junior Conservation Club." The object of this group was to promote sportsmanship among the younger sportsmen in our favorite outdoor activities, hunting and fishing.

These boys met after school hours and discussed ways and means of accomplishing their object. Suggestions were made, various speakers heard and most important activities were conducted.

Trips in the fall to feed game, hunt and general outdoor wildlife activities were undertaken. During the winter the work lagged, but when spring arrived the boys' enthusiasm turned to fishing. Trout stocking was done on several occasions and at these times, likely places to fish and where to find the large trout were presented to the boys.

Through the kindness of Warden Mosier, of Bellefonte, a group of the boys were shown how to trap, and where to find weasels. Many traps were set and visited till some unsportsmanlike individual stole the boys' traps. In the meantime two weasels were trapped and the bounties were earned by the boys.

The work described was started in 1934-35. In the following year a similar club was formed and continued the good work of the previous group. The Junior Conservationists continued their out of school organization until 1937 when a Conservation Club was officially organized in the Junior High School. This club had about 60 members all of which were boys and the following program was given to them:

Purpose: To create a truer appreciation of the great outdoors; to learn and understand many of nature's interesting secrets; to instill the meaning of real sportsmanship when in direct contact with nature, especially while hunting, fishing and hiking.

Aims: (1) Become acquainted with hunting dogs, (2) learn to know our game birds and animals, (3) Taxidermy, (4) Feed birds and animals during winter, (5) Knowledge of our fish and where to fish, (6) Stream improvement, (7) Fly tying, (8) Birds—song, etc., (9) Trees—names, planting, etc., and (10) Stocking of game and fish.

Methods: (1) Through lectures, (2) by practical application (hikes, trips, etc.), (3) by moving pictures, (4) by reading fish, game and conservation news, and (5) story hour—adventure in the field.

Mr. John Doty, who was President of the State College Conservation Club, recommended a Juvenile Fishing Project in 1936 but this was not realized till 1937. Due to the untiring efforts of Mr. Doty, Mr. Northrup and others, this project was finally completed in the spring of 1937. Two landowners, Mr. Garver and Miss Thompson, gave permission for their land to be used for this purpose. It included about one-half mile of Thompson Run, which is a clear cold spring stream. This was posted and stocked by the boys and only those children under license age were permitted to fish in the stream.

The older boys acted as wardens and aided the younger boys. Instruction on fly fishing and care in bait fishing was given the children by the older fishermen.

The following year the landowners were approached; Mr. Garver refused to open his section due to destruction of plants, etc., on his property. Miss Thompson agreed to open her property if certain improvements were made and if the children used only one side of the stream and stayed off the bridges. With this in mind our work was started.

The boys built up the banks by planting sod and packing rocks in low places. They planted willows along the stream, built deflectors, stocked trout and put up posters so that when April 15 came around, everything was in tip-top shape.

This project has increased local and adult interest in conservation education and has aided materially in taking care of the leisure time activities of boys who can find nothing to do but get into mischief.

We hope to continue our project during the current year and wish to invite anyone to come and see our project.

During 1937-38 the State College Club sponsored the Junior group. Several reels for an 8 M.M. camera were purchased and now a 200 foot reel of the youngsters activities is available to be shown by the author. These pictures include game feeding, trout stocking, style building, fence repairing, posting the stream against Sunday fishing, the Juvenile project, its posters and deflectors,

Future conservationists, every one.

Girls as well as boys take to fly tying.

action on the project the first day of the season in 1938, and pictures of Fishermen's Paradise, on Spring Creek, on the opening day of that project last year.

A library of *Game News*, PENNSYLVANIA ANGLER, and other pamphlets issued by the State are on file for the youngsters' use. These have been used enthusiastically by the young sportsmen.

In 1938 a fly tying class was begun with "Pete" Hoffman as instructor and Earl Kline as an assistant; the art of dry and wet fly tying was shown. The class contained about 40 people. Some instructions in fly casting were demonstrated to the group after six lessons on fly tying.

Last year was a banner year for the Junior Conservation Groups. Our project promoted good sportsmanship, conserving of wildlife and fish life with the idea of hunting and fishing for the joy of it, rather than to kill.

The present school year saw four different clubs in action. Due to the fact that Mr. Charles Shick, a graduate student at the College, could aid in the work, he sponsored two clubs and Miss Lloyd, a Junior High School teacher, sponsored a Junior High Girls Club. The clubs had a total of 160 members, a great many of whom were very active. The following is the program outlined for them this year.

Junior Conservation Club

To promote, direct, and do practical work in all forms of Conservation.

Following is a list of ideas and suggested activities for club members:

1. Studies of the game animals, vermin, song birds, hawks, owls, and insects. Report on the number seen, species, places, habits, etc.

2. Building of game shelters, establishment of food stations, building of bird houses, and the raising of game birds, planting and collecting of hickory, butternuts, and walnuts.

3. Building of styles, deflectors and the assistance in posting streams.

4. Study of our trees—names and uses.

5. Archery—how to make a bow and arrow and to shoot.

6. Guns—kinds, use and care.

7. Fishing equipment—how to buy, what to buy, and making rods.

8. Fly tying—all types and kinds of flies. Fly-casting lessons.

9. Hunting dogs—training and kinds.

Remember that SPORTSMANSHIP is: Thinking of others at all times. Your attitude makes a real *man* or *woman* of you. Learn to *conserve* in all you do.

Shelter building, game feeding, hunting with and without a dog, crow shoots, with the purpose of fire-arm instruction and lectures on many phases of wildlife have constituted our fall and winter program this year.

With the coming of the trout season our spring program has been launched. Many streams have been stocked all with Junior Conservation aid. Mr. "Bill" Seckinger has been an able and reliable help with the group in this respect.

Work is now under way to aid the farmers along Spring Creek. Many landowners desire their land posted against Sunday fishing, their fences repaired and styles built. The Juniors assisted in this work last year and will do the same this year.

One of the pet hobbies of the Clubs is fly tying. Last year about 40 youngsters bought beginners fly tying kits and learned the art. I feel that sportsmanship and conservation can be taught if we promote fly fishing.

This year there are three fly tying classes in State College. One for beginners with about 20 members, one for tiers with one year experience with about 12-15 members and one for an advanced group with about 20 members.

We are greatly indebted to Earl Kline, for his work with the beginners, to Ed. Book, for his work with the intermediate group and to Hassell Lose, for his work with the advanced group. All groups are having a fine time and each meets 6 times—one per week for six weeks.

This year the idea came to me to try and establish Junior Conservation or Sportsmen's Clubs in all of our county schools. The Fed-

(Continued on Page 22)

The fly tying course proved highly popular.

RECORD REVIEW

Record Catches of Fish in Pennsylvania Waters Since 1933

By ALEX P. SWEIGART

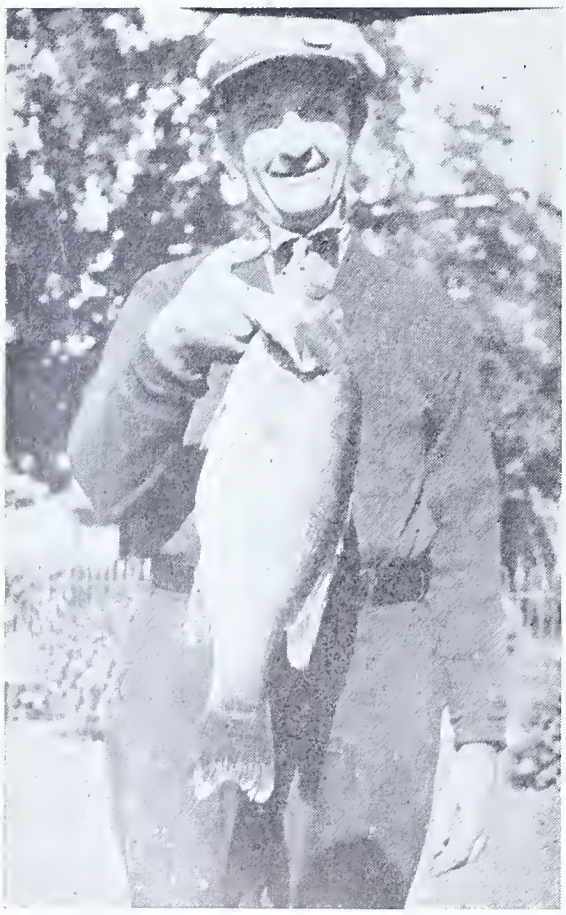
BACK in 1933, the ANGLER compiled its first list of record fish taken from Pennsylvania streams and lakes, and a review of tackle-smashing game fish caught since that time is all the testimonial needed to attest the skill of the anglers of the Keystone State. In response to numerous inquiries relative to top-notch catches, the following list has been prepared, each species being treated separately. To avoid repetition, record catches scored during 1939 and listed in the last issue of this magazine will not be included.

Brook Trout

1933. George Raub of Easton captured the prize brook trout or charr that season when he caught a vividly marked native measuring 19 inches in length and weighing three pounds.

1934. A 16½-inch brookie caught by Bert Haines of Powell, in Schrader Creek, Bradford county, was the longest brook trout recorded. No weight or girth for this fish, taken on a minnow, was given.

1935. A boy angler claimed first honors in the brook trout division that year. It remained for John Lucas, 14 years old, of Mildred, Sullivan county, to land a brookie reminiscent of the days before the log drives. Fishing in Glass Run, a tributary to famous Loyalsock Creek, he creeled a brook trout 20 inches in length, 12½ inches in girth and weighing four pounds. A minnow was the lure used.



A 21 inch smallmouth bass taken in Perkiomen Creek by Walter Taney of Norristown. It weighed five pounds and was one of the topflight fish in that division for 1935.

1936. Mrs. Edna Salamy of Shenandoah had the distinction of taking the state's champion brookie this year. Her catch, a 17-inch fish, was caught in Fishing Creek, Columbia county. It was a gracefully proportioned and brilliantly marked charr tipping the scales at 2 pounds 8 ounces.

1937. The record brookie for this year was a 19¾-inch fish weighing 4 pounds 4 ounces. It was taken on a brown hackle wet fly in Black Creek, Schuylkill county, by Collier H. Kear of Minersville.

1938. Apparently Schuylkill county waters held a monopoly on record charr or brook trout taken in 1937 and 1938. Arthur "Buddy" Howells of Tamaqua took the topnotch fish in this division during '38. While fishing worm in Kunkels Dam on Pine Creek, a spot not widely known as brook trout water, he caught a vividly marked native measuring 20½ inches in length and weighing 3 pounds 8 ounces. Girth was not given.

Brown Trout

1933. The 1933 trout season was well under way when the taking of a mammoth brown trout from Yellow Breeches Creek in Cumberland county caused a stir with Central Pennsylvania fishermen. Harry Squibbs of Leidigh's Station had hooked the big fellow a number of times, only to have it break away. Finally, equipped with heavy tackle and using a minnow for bait he lured the giant brownie to the strike. After a hard battle it was landed and when weighed tipped the scales at 8 pounds. It measured 27½ inches in length.

"That trout has set a season record" was the prediction of more than one angler who saw it. But 1933 had still another surprise in store. Up on Fishing Creek, Clinton county, a big trout of tackle-smashing tendencies had held sway for a number of years. Harry McClintic, expert Mill Hall minnow fisherman, played it to a finish one evening in June. The weight record for brown trout taken on hook and line in Pennsylvania waters was definitely set by this giant of the brownie clan. In length it measured 27¾ inches, was of massive girth and weighed, dressed, 9 pounds one ounce. A fine brook trout, 10 inches in length, was found when its stomach contents were examined.

1934. Real brown trout history was in the making this year and a fly fisherman was destined to make it on Pike county's Lackawaxen. Bill Percival, who lives at Matamoras, Pike county, knows the Lackawaxen like a book. He has studied its pools and riffles and habits of the mammoth brown trout that haunt them for many years, fishing for the big fellows almost exclusively. In 1934, he concentrated on Pennsylvania's record brown for that year a number of times but the big fish was too wary to be hooked. Then, in July, during the waning days of the trout season, it happened. Percival was fishing with a slender four ounce fly rod when the brown giant struck and the battle was on. For one solid hour, this grandfather of Lackawaxen brownies surged against the frail rod and comparatively frail leader. Finally it was brought to creel and another unforgettable incident had been imprinted in the thrilling saga of the whippy fly rod and the men who fish it. Percival's catch had a length of 30 inches, a girth of 15½ inches and weighed 9 pounds 7 ounces.

1935. The largest brown trout caught was that creeled in Brokenstraw Creek, Warren county, by Duard May of Corry. It measured 26 inches in length and tipped the scales at 6 pounds 12 ounces. No girth was given.

1936. The Lackawaxen River in Pike county once more produced the record brown trout taken in the state. A 29-inch fish weighing 7 pounds 4 ounces, was caught on live bait by William Vandermark of Milford. Vandermark made a notable catch on this occasion, May 16, landing two other big browns, 22 inches and 23 inches in length. The three had a combined weight of 14 pounds.

1937. Topping the list of big brown trout was a fish taken in Little Spring Creek, Lehigh county, by J. Isamoyer of Topton, Berks county. He had taken his wife to see the doctor and while waiting for her decided to try his luck in the stream. A big brown trout struck the minnow he was casting and after a hard battle was landed. It measured 29¼ inches in length and weighed 8 pounds 4 ounces. Girth was not given.

Members of the Ranger Rod and Gun Club with the 1935 record wall-eyed pike taken in the Upper Delaware by their president Andrew Anthony.

1938. Outstanding of the big browns taken as the fish caught in Spring Creek, near Bellefonte, Centre county, by David Mills of Milesbug. It was 28½ inches in length, had a girth of 16 inches and weighed 8 pounds.

Rainbow Trout

1933. No rainbow catches recorded.

1934. In the rainbow trout classification, the largest fish reported was taken in Jordan Creek, Lehigh county, by Allen Bear of Bethlehem. His catch measured 19½ inches in length and weighed 4 pounds.

1935. Lehigh county again produced the largest rainbow trout reported. It was a 19½-inch fish weighing 3 pounds 14 ounces and was caught in the Little Lehigh near Allentown by Warren Yeakel, Allentown, on a worm.

1936. Lake Koon, located above Lake Gordon in Bedford county, yielded the record rainbow trout of the year. Taken by Rawley Swayne of Cumberland, Md., this rainbow measured 24½ inches in length, had a girth of 11 inches and weighed 4 pounds 5 ounces.

1937. Lake Gordon, Bedford county, produced the record rainbow trout of the year. Having a length of 26½ inches and weighing 5 pounds 8 ounces, it topped all other catches for the season by a wide margin. William J. Parks of Windber scored this catch on a nightcrawler.

1938. Fishing Creek, picturesque Clinton county trout stream, had the distinction of yielding the season's champion rainbow trout. This fish, 21¾ inches in length and weighing 4 pounds 15 ounces was caught by Fred Laird of Lock Haven.

Smallmouth Bass

1933. Lake Wallenpaupack in Pike and Wayne counties produced the record smallmouth bass reported, a fish weighing 6 pounds 4 ounces and taken by George Rickard of Honesdale, Wayne county.

1934. Fishing in the Conodoguinet Creek, Cumberland county, in October, Upton Glass of Carlisle, made an unusual catch of big smallmouth bass on leopard frogs. Six smallmouths, including the year's champion fish of the division with a weight of 5 pounds 8 ounces, comprised the catch, the other fish ranging in weight from 2 pounds to 4 pounds 8 ounces.

1935. A light casting lure fished by Elmer Lower, veteran New Cumberland angler, in the Susquehanna River near the Cumberland county community proved the undoing of one of the finest smallmouth bass ever to be reported taken in Pennsylvania waters. This fish was 22½ inches in length and weighed 6 pounds 3½ ounces.

1936. The Upper Allegheny River yielded the champion smallmouth bass that year. Taken by John Ewing, Tarentum, on a plug, it was 21½ inches in length and tipped the scales at 5 pounds one ounce.

1937. Central Pennsylvania bass waters were again in the limelight with the record smallmouth of the year. A smallmouth measuring 24½ inches in length, having a girth of 15½ inches and weighing 6 pounds 2 ounces, was taken on plug in the Conodoguinet Creek, Cumberland county, by Ed Meadows, Jonestown Road, near Harrisburg.

1938. Fayette county's Lake Lynn yielded the record smallmouth of the year to John Fallet of Lake Lynn. It was 22 inches in length, had a girth of 15½ inches and weighed 5 pounds 6 ounces.

Frank Seas of Easton with the largest walleyed pike ever to be recorded on the ANGLER Honor Roll.

Largemouth Bass

1933. William Schoonover, Lehman's Lake, Pike county, caught the record largemouth for that year in the lake. It weighed 8 pounds 4 ounces.

1934. The previous year's record largemouth was bettered by a fish taken on plug in Harvey's Lake, Luzerne county, by John Warzechowski of Nanticoke. It measured 24 inches in length and weighed 8 pounds 8 ounces.

1935. Fishing plug in Lake Carey, Wyoming county, William Ingam of Kingston caught that year's record largemouth, a fish 28 inches in length and weighing 8 pounds 8 ounces.

1936. Stillwater Lake in Monroe county, famed for the size of its largemouth bass, yielded the record largemouth of the year to John Hosier, Easton, RFD No. 2. Taken

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Tuther nite down ter the store we wuz atalkin' erbout critters thet wuz raisin' merry ned with our fish in them low water munths last summer an' Jed Tims allowed thet snappin' tortles is rite at the top in thet line. Reckin mebbe he's rite, at thet, an' a big snapper kin sure stow away a lot o' fish in a seezun, but in our big crick we ain't got so menny o' these critters. Durned ef I didn't ketch a snapper up on the ridge road, miles away frum enny water thet I know of erly in September. I wuz arattlin' along in the lizzie when I seed the critter makin' fare gude hedway an' goin' the same way I wuz aheadin'. Got out o' the flivver an' thet tortle shure did make a nasty hissin' afore I grabbed it by the tail an' throwed it in the back. Give it ter Joe Sides an' he sez him an' the missus hed a rite gude mess o' tortle soup frum it. Onley thing I cude figger wuz thet sum pond er uther thet the tortle hed bin astayin' in back in the ridge musta dried up. Ennyway, it wuz aheadin' plumb fer the crick when I ketched it. If the danged critters kin move erbout like thet, a feller's like ter find 'em in enny water thet hez fish in it, I figger.

Now mebbe the snappin' tortle is tuffer on our fish then enny killer we got, but in the long run, I reckon the watersnaik hez him one up. They be so durn plenty in most sections o' our crick thet all put together 'tain't likely the tortles is gonner do ez much hurt in a yere ez them snaiks. An' rite now, I'm asayin' thet this past yere shure hez been a gude one for watersnaiks. Thet low water we hed made these devilish critters regalar terrors fer our trout, an' I kilt a big she watersnaik lait in July thet wen I opened her up hed six minnies an' chubs and three stone catties in her. With our feed not too hot in the big crick fer bass, I reckon the snaiks durin' low water didn't do enny gude. This here snaik wuz kilt rite close ter a hole along the shore thet had trapped a lot o' minnies in it when the crick got too low.

A rite gude new Yere's resalution fer us fellers thet like ter fish ter maik, I figger, wude be ter plan ter thin down the watersnaiks cum next spring. They kin stand it on a lot o' our runs an' the big crick hereabouts.

Question: The other night a group of us were discussing the effects of the drought on streams in our section of the state (the central counties). During the discussion, the expression "The capacity of a stream to maintain fish life may only be judged when that stream is at its lowest level" was used. In what respects does this apply to, say, a trout stream?—J. D.

Answer: The expression you refer to is one that has been a common axiom for years with fish culturists. Boiled down, it is one of the most logical expressions in describing the effect of drought on fishing waters. Other factors being favorable, a stream that maintains a constant and uniform flow of water throughout the year may be relied upon to have a consistent supply of forage year after year. On the other hand, a stream that shrinks to a succession of stagnant pools during periods of severe drought, with the riffles, vital food producing areas in any stream, drying up, is virtually certain to lose much of the supply of forage vital to the welfare of its fish population. In other words, the carrying capacity of a stream from the angle of the food supply is directly based upon the minimum flow it carries during periods of drought. Wet weather streams, as permanent fish carriers, cannot be taken seriously.

Question: I have often heard the brown trout referred to as being a notorious cannibal far more inclined to that tendency than our native brook trout. How about it?—R. E. J.

Answer: The tendency of big trout toward preying upon smaller of their kind, we believe, is a matter of body requirement. A 22 inch brown trout, owing to the growth it attained in waters that at one time probably only produced brook trout up to 14 inches in length, obviously requires more food for existence than this type of stream can normally produce. The tendency to prey upon larger fish, including its own kind is then intensified. In addition to other trout, minnows and suckers are frequently taken. However, to assert that big brown trout have this tendency to a greater degree than our native brook trout or charr is, we believe, a fallacy. Big brookies are rabid cannibals on occasion. The same goes for all of our popular protected game fish when they attain great size, this list including the rainbow trout, the smallmouth bass, the pickerel, the walleyed pike, the muskellunge and the largemouth bass. Perhaps the very aggressive qualities we so admire in these popular species are major contributing factors to cannibalism.

Question: How long should a good grade soft braided silk casting line of 12 pound test last if cared for properly?—J. W.

Answer: Any answer to that question must be based upon the amount of usage to which it is subjected. A bait caster making frequent fishing trips during the season should be able to figure on two new spools of 50 yards each to last him for the season. It is a good plan, after using a line for perhaps a month, to turn it, thus insuring even wear for the entire line. It is a good idea to test the strength of a line fairly often between the fingers for some mighty fine fish are lost each year through overestimating the amount of wear any casting line will take.

Question: What is a good winter bait for sucker fishing?—P. L.

Answer: Small garden worms, particularly the little red fellows with red vein visible under the skin, make ideal bait for sucker fishing. Better keep in mind, however, that the wise winter sucker fisherman digs his bait before the ground freezes and keeps them in a warm cellar until needed. Of course, in an emergency, a supply of bait may sometimes be secured on the sheltered side of a manure pile in farming territory.

Question: What kinds of carp are common to our streams?—R. Y.

Answer: The scale carp, the leatherback carp, completely minus of scales or having a few prominent ones and the silver carp.

ALMANAC FOR HUNTERS

For those fishermen who find a kindred thrill to the flashing rise of trout to fly in the thunderous flush of a grouse from a pine clump when autumn tints the leaves, we feel that the New Hunter's Guide and Almanac for 1939-40, compiled by a veteran guide and sportsman, "Rusty" Ancker of Chicago, Illinois, will hold much of interest.

Containing 200 well illustrated pages relative to hunting in the United States, Mexico, Canada, and Alaska, the Almanac contains much of timely interest to the gunner, and we feel that the genial "Rusty" is to be commended for a fine job in its compilation. It can be secured by getting in touch with the Haywood Building, Lafayette, Indiana. The price is $1.25.

Slightly out of perspective but a nice bass at any rate. Measuring 19 inches in length and weighing 3½ pounds, it was taken on plug by Special Warden March of Pottstown in the Perkiomen Creek at Salford.

HERE'S A TIP ON FISHING 'CRAWLERS

Writes Jess Best of Homestead:

"I have been reading the ANGLER for the past few years and the only thing that I can see about improving the magazine is more issues each month. I buy them all and for real fishing facts, I find the ANGLER most always saved. What Chas. M. Wetzel has written in the magazine I sure did enjoy and learned a lot about tying flies, hair bugs and hair frogs that I could not have read about anywhere else. Would like to meet him and shake hands with him because since learning to tie these flies and bugs we surely have caught a lot of bass.

"Don't know if you know that you can catch smallmouth and largemouth bass with nightcrawlers all day long by just moving along and casting the worm as easily and far as you can. After catching the worms and arriving home, spread them on the floor and pick out only the ones that are uninjured. (Bass do not appear to like a worm that has had the tail broken off or bitten off by a small fish).

"I never place worms in anything but paper torn in small pieces and wet slightly. Then using a cardboard box, I place the paper and worms in it. In my hunting coat pocket they always remain cold, not just cool. If I want to hold them, I still keep them in this container and place it in a cool place.

"In fishing 'crawlers, a nine foot fly rod, fly line with backing line, a 10 or 12 foot leader of 10 pounds test and a number 8 hook have worked nicely. Do not remain in any one place too long but keep moving along the shoreline casting (or better call it, swinging out) the worm. In this way you will catch more bass and big perch. It is necessary to have a lot of loose line in your hand when a fish strikes and, if using a single action reel, let the fish take line from the reel with the click off. At the slightest drag, the fish will often drop the worm and then it is a good plan to bring it in and bait up again.

"Have lost a lot of big fish because I could not get the line off an automotic reel fast enough for their run, hence, to my mind, this type of reel is out for the particular kind of fishing mentioned. Now carry two reels, automotic and single action, the latter being for worm fishing. We hook the worm just under the skin at the band, the hook point toward the tail. It is advisable to set the hook at the start of the second run, as I think by that time the fish must have turned the worm headfirst and does not usually feel the hook point. Have had a bass take all of the fly line, 33 yards and about 100 feet of light backing line and still failed to hook it. Big perch take it out in short, jerky runs but you soon learn to know when the second run starts. Always tighten the line after the first run, then let the fish go about five feet and set the hook. In this way, bass are often caught in the mouth, not deep down. As a matter of fact, I turn virtually all of my fish loose when taken by this method hence do not want them to be injured seriously.

"My pal and I fished 98 days last year usually varying our methods according to the time of day. Generally I started with plug, using a No. 3200 Plunker, made by the Creek Chub Bait Company of Garrett, Indiana. The system followed with this plug is to cast it, then let it lie on the surface counting to 75. Then tighten the line slowly, jerking the plug just enough to make it "pop", let it float again, counting 50, and on the third count go to 25. Bill starts one way and I the other and we do catch a lot of bass generally in the first two hours of the day. Then we switch to the fly rod for the rest of the day. We use a small spinner and squirrel tail that I make myself and often catch many bass, crappies and large perch during the day. A No. 8 hook is used. We also take bass on the hair frog using the same system as that employed with the Plunker. Almost forgot to say that I use a good length leader with the plugging outfit, this being of 15 pounds test artificial gut, also a 12 foot leader of artificial gut with the fly rod, never using either leader a second day."

SCOTTS POND POPULAR

"I am taking the liberty of enclosing a snapshot of Scotts Pond at Bridgeville, Pa., fishing paradise of the Bridgeville District Sportsman's Association, this picture being taken on the first day of bass season last year", writes Wilmer D. Engel for the Bridgeville Association. (Photo on another page).

"The ponds are well stocked with bass and other fish and afford local anglers many enjoyable hours of matching wits with the elusive king of the waters.

"The local sportsmen's organization are proud of their accomplishment in providing local fishing grounds for local anglers and while Scotts Ponds were the only waters at Bridgeville stocked with fish at the time, negotiations have been under way to lease additional streams in order to expand stocking".

KILLS WATERSNAKE WITH 18 YOUNG

"Having noticed recently in the ANGLER that a watersnake with 17 young had been killed", writes Ted Skotnicki of McKeesport, "I want to tell you that while hiking from our McKeesport camp in Centre County, about four miles from the camp, I saw a snake under a large rock. With a stick in one hand, I rolled over the stone and there was a large watersnake.

"With the first throw of a stone, I killed the snake. As it was the first watersnake I killed in this section, I carried it to our camp. Upon arrival, and noticing that the snake was very fat, we decided to open it. To our amazement, this watersnake contained 18 young and a beautiful brook trout of which part of the tail was digested. The trout measured no less than 11 inches. Unfortunately we did not have a camera with us but other members of the camp who saw the stomach contents can verify this report".

W. Coyle and A. Socher of Blawnox with their canoe following a float on the Allegheny to Tidioute. Special Warden Socher reports that on this float on the morning of July 4 last year they checked 21 fishermen who had a total catch of 38 bass, a muskie, a walleyed pike, 18 suckers and two carp.

Increasing Fish Production in Ponds

H. S. Swingle and E. V. Smith

Alabama Agricultural Experiment Station, Auburn, Alabama

APPROXIMATELY 2,000 small ponds have been constructed in Alabama by farmers and sportsmen for the purpose of raising fish. These ponds have a total area of between 17,000 and 20,000 acres and represent an investment of over $1,500,000. The water supplying these ponds is furnished by springs, streams, artesian wells, or by the "runoff" from terraced fields or pastures. Increasing numbers of ponds are being constructed yearly, with a corresponding increase in the demand for information on various phases of pond management. In order to obtain information on which to base recommendations, experiments dealing with methods of increasing fish production in ponds were begun at the Alabama Agricultural Experiment Station in 1934.

The ponds available for these experiments varied in size from 1.400 acre to two acres. The smallest ponds were of concrete and were used mainly for preliminary experiments on fertilizers. Further testing of the more successful fertilizer treatments and preliminary stocking experiments were carried on in small excavated ponds having an area of 1.130 acre. The results of the more promising treatments were next checked in tenth-acre ponds, and finally in ponds having an area of from one to two acres. The experiments were conducted as follows: The ponds were allowed to dry out for a week or more before the beginning of the experiments in order to be sure that no fish or food remained from preceding experiments. The ponds were than filled with water and the desired number of each species of fish counted, weighed and placed in each pond. At weekly or bimonthly intervals water samples, consisting of a vertical column from top to bottom of the pond were removed and analyzed for centrifuge plankton, pH, nitrogen phosphorus, oxygen, carbon dioxide, and bicarbonates; counts of the relative abundance of zooplankton forms and a record of the principal phytoplankton present in the centrifuge plankton were also made. At monthly intervals the larger ponds were seined, and samples of fish removed, weighed and preserved for food studies and permanent growth records. At the end of the experiments (usually in November or December) the ponds were drained, the species sorted, counted and weighed, and samples were again preserved for permanent records. A complete record is therefore available of conditions in each pond throughout the experiments. Some of the principal results of these investigations will be discussed briefly.

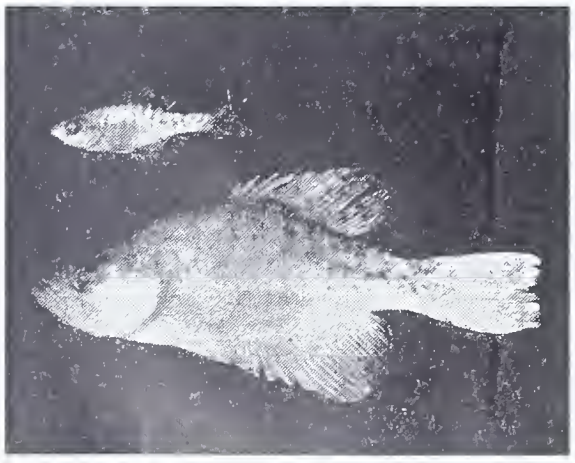


Plate 1.—Difference in average size of crappie at age of six months due to overstocking. Upper—Stocked at rate of 2,000 crappie per acre. Lower—Stocked at rate of 600 crappie per acre.

Effect of Various Rates of Stocking on Fish Production

The production of bluegill bream in unfertilized ponds has been approximately 100 pounds per acre year after year regardless of differences in stocking. In May, 1936, one pond was stocked with bluegill bream fry at the rate of 26,000 per acre, weighing 2 pounds 5 ounces. Another pond was stocked with year-old fingerlings at the rate of 13,000 per acre, weighing 180 pounds. Analyses through the year indicated that the food available was equal in both ponds. When drained the following November, the former pond produced at the rate of 105 pounds of fish per acre and the latter at the rate of 92 pounds per acre. One pond gained 103 pounds per acre, while the other lost 88 pounds per acre due to overstocking.

The results on fish production for a two-year period in a 1.8 acre unfertilized pond are given in Table 1. In 1935 a total of 4,485 fish was used to stock the pond, while in 1936 a total of only 236 fish was used. Regardless of the great differences in stocking, the total pounds of fish present was almost exactly the same at the end of each year (163 to 164 Pounds per acre). Similar results have been secured in many other experiments.

The above results offer evidence for the statement that a given pond can support only a certain weight of fish per acre and that fish production (measured in pounds per acre) cannot be increased by the addition of more fish of the same species to the pond. When the food supply was not increased, the addition of more fish to a pond decreased the average size of the fish when those added were able to survive (Plate 1.) If they were not able to survive, their addition did no good beyond furnishing high-priced food for the carnivorous fish already present. Similar results have been reported by Meehan (1936) from experiments with small bass, and by Thompson and Bennett (1938) in management studies of Illinois lakes.

Effect of Size of Fish Used in Stocking on Fish Production

Stocking with large fingerlings has recently been tried since poor results have so often been obtained from stocking with smaller fish. The use of larger fish has proven of little value when stocking with bluegill bream. Where the food supply was sufficient, half-ounce bream reached a size of 4 ounces within a four-months period in ponds, while under less favorable food conditions 2-ounce bream actually decreased in weight during the same period. If food was abundant, small bream rapidly become large bream, while if food was not abundant large bream just maintained or even lost weight.

Only in cases where there was an overpopulation of forage fish has stocking with larger size carnivorous species proven beneficial. Since young bass and crappie feed upon microcrustacea and insects until several inches in length, they must compete during this period with bream, shiners and other forage fish. In cases of severe overpopulation, the carnivorous species, when added as fry, have required as much as two or more years to reach size large enough to begin feeding on the other fishes. However, in these same ponds, bass large enough to feed upon these fishes have gained as high as 2 pounds in a seven-months period.

Plate 2.—Difference in size of crappie due to proper stocking and fertilizing of ponds. Upper: An unfertilized pond was stocked with 7 brood crappie per acre, and 1,100 small crappie were present at the end of the first year. The picture represents the average size of these crappie at the end of the second year. Middle: Size of crappie used in stocking fertilized pond. Two hundred were added per acre of water. Lower: Average size of crappie in fertilized pond eight months later.

In ponds containing considerable numbers of large carnivorous fish, there is usually a scarcity of forage fish. Under these conditions it was found that bass or crappie fry grew rapidly because of the abundance of food for small fish. However, upon reaching a larger size, their growth was stunted due to lack of forage fish. For example, in one pond stocked with 2-ounce crappie, these fish gained only one-half ounce during a seven-months period. They spawned in the pond and their young grew rapidly, reaching an average size of an ounce and a half by fall. During the same seven-month period in a pond containing sufficient food for both large and small crappie, fingerling crappie (averaging one-third ounce when stocked) grew to an average size of 8 ounces.

Similar results were secured when an old 30 acre pond was stocked with several thousand bass 6 to 8 inches in length. Practically none of these fish was able to reach the legal size during the next three seasons; they grew less numerous each year and finally disappeared. Apparently they were either eaten by large carnivorous fish or died from starvation.

Where food was available, stocking with small fish has given as good and often better results than stocking with larger fish. In all cases, the total production was dependent upon the food available in the pond and not upon the size of the fish used in stocking.

Increasing the Natural Food for Fish in Ponds

These experiments have merely served to emphasize for fish what is already known concerning other animals, namely, that the main problem in increasing production is that of increasing the food. Economical

(Continued on Page 29)

HOW'S YOUR FISHIN'? AN ANGLER'S VIEW

This letter has a purpose, a very definite purpose. It is not idle patter, it has a mission intended for one man; perhaps there are others, but one man in particular, writes S. H. Crawford, Secretary of the Charleroi Sportsman's Association at Charleroi.

I entered a sporting goods store the other night and lo! there he stood, the center of attraction spouting off his wonderful trip to ———. He had caught 82 fish in one day, trout and bass.

He was done fishing in our state. They would never sell him another license. He wouldn't waste his time, money and gasoline around here. There are no fish within 300 miles of our town.

I have about reached the point where I can no longer hear with the wonderful accounts of the fishing here, there, and everywhere but our own state. Yes, Sir, he was done in our state. He was tired of going out and returning with one empty creel after another. In a way I can sympathize with him and his attitude. Such has been my experience on several occasions this season.

Maybe it was true. They weren't there to catch, maybe I wasn't good enough. I don't know, but I suspect it was the latter.

I have spent the opening of bass season each year at Pymatuning and have seen hundreds of fishermen come and go. I have talked with lots of them. In the main they were satisfied since they caught an abundance of small fry. I'll have to admit that bass have been scarce.

This year on opening day I timed myself. I started to fish, that is, I made my first cast at 6:21 A. M. and six minutes later, using a small river runt I had my first bass. You'll admit, my friend, that is not bad. I fished off the point to the left of the boathouse. Using plugs for the first two hours I had my fun. The bass were not big but scrappy. He was a thrill as is always the first—doubly so—for it was taken from under the nose of four men in a boat who swore by all that is holy to a fisherman that they had fished the spot for two hours without a strike.

Pymatuning has always been an enigma to me. I can't figure it out. I have read quite a bit about fishing, have fished a lot, and covered a lot of territory but to me it is still a problem. I have fished, where, according to all the rules and regualtions they should be, but they aren't. Fishing the unlikely spots, I found them. Good days (according to the dope) no fish, bad days, fish. Maybe someone has solved this riddle. If so, please pass on the good word to the rest of we poor fellows.

One hears a lot of fellows ridiculing this place but they should take into consideration the newness of the lake. Its now changing shoreline and bottom surface, the grasses and brush yet to be decayed.

It is full of carp. Yes, and will be for some time, but that is no crime. A good size carp is about all I want to handle on a fly rod. I have felt a weakness at the pit of my stomach as I felt one on my rod and seen it bend out of proportions. They are no sissies.

Give this place 10 to 20 years and it will be a bass man's paradise.

Getting back to my speech making friend who swears he is done fishing in our state. I'll admit he has reasons for becoming disgusted but no reason for quitting. My biggest thrill from fishing is not how many, nor how big, but getting one, especially, when they are tough to get.

Due to the fact that our state is so heavily populated and our streams so hard fished, it is not an easy matter to fill your creel. We should all realize that point.

Opening day of this trout season we were out on Laurel Creek and had no luck. Normally this is a good stream. I'll admit it tests the medal of a good fisherman. It is tough to wade, rough and rugged, as well as beautiful. Talk of Canada, if it is any wilder than some parts of this place, then I'll be pleased to stay at home.

However, due to heavy rains, the water was high, fast and furious. Wading was impossible due to the water and rough footing but we bravely made an attempt, hoping against hope we would be lucky enough to land one from behind a boulder or in a slow eddy. A slow drizzling rain had been falling but now it turned into a downpour. We were only human. We gave up. There we were only noon and we were ready to go home, nothing but three wet men and three empty creels.

On our way home we decided to stop off at Dunbar Creek, which according to our friend Jim Banning is one of the finest spots in the state. He had been talking to us the night of our sports rally and said it was well stocked with legal fish. Well, we decided to find out.

Upon our arrival at the first pool we were greeted by some twenty to twenty-five fel-

(Please turn Page)

Angler Duffield of Croydon (better known as Mike) with half hour catch of carp from Neshaminy Creek near Bridgewater. The fish weighed 3½ and 7¾ pounds and were caught on a cold and blustery November day. An expert carp fisherman, Duffield tries his favorite sport in any kind of weather. E. Mac Wright, photographer of Bristol, snapped the picture of Duffield.

lows, who to say the least were plenty wet and disgusted. No legal trout, no, not a one. All small, plenty of six and seven inchers, but no legal ones.

Here at Dunbar we were allowed only artificial bait and nothing less than nine inches, which, by the way should be the legal size over the state. That is, of course, one man's opinion. I never have been able to figure out just what you would eat after taking the head and tail from a six inch trout.

Well, Bill, Dad and I, thoroughly wet anyway, decided to try 'em out. Here our speech making friend would probably have said, "Oh, nuts, let's go on home, nobody is getting anything", but not us.

Well, after reassembling our rods my friend Willie walked to the pool, looked it over carefully for a few minutes, squeezed in between two fellows, said, "Pardon me", and proceeded to make his first cast. No soap, no fish, not even one of the plentiful small ones. He retrieved slowly, keeping the line out of the limbs. Cast again and there he was thoroughly and completely tied into a nice brownie. Jim Banning must have been right. He said he put 'em in there and we could take 'em out. Bill did.

I moved up the stream ducking under fly lines all around. By now the rest of the gang had redoubled their efforts. Sliding cautiously into position against a stone I pulled off some line flipped it back and forth and finally out. The little killer hit the water, sank and I started my retrieve, two feet, three feet, five feet, but no soap. When my line which had now floated ten to twenty feet below me, came near a fellow below, in fact, was right at his boot tops, one struck, splashing water in the fellow's face practically. A few minutes later he was in the creel. Not big, but good enough for me, eleven inches of fighting brownie had done me battle. I had had my thrill.

There we were, three casts and two legal trout and that whole gang had sworn there were no big ones there. Call it luck, perseverence or what, we had our thrill. Our speech making friend would have missed his.

No, my friend, fishing is not as simple as it once was, but it is just as thrilling if not more so. I like to catch 'em same as you, but my thrills come from such instances as you have read, getting them when they are tough to get. They taste twice as good.

If I could get one every cast or flip of a fly there soon would be no thrill in it for me. Fess up now, how about you?

"EMERGENCY" BUTTON

A friend of mine seems to have found another use for the button that accompanies the Fishing License, comments D. L. Batcheler of the Game Commission.

Miss Mary Rank, a teacher in the Williamstown School, while fishing in the vicinity of upper Clark's Creek seems to have "popped" several buttons on her "slacks" and would have been quite embarrassed if she had not thought of using the fishing button to cope with the emergency. From what I gathered, Miss Rank will always be 100% for the type button now used.

William Wasser of Edwardsville with the record walleyed pike for 1937. He scored the catch in the North Branch of the Susquehanna River.

RECORD REVIEW

(Continued from Page 15)

on plug, his catch was 23½ inches in length, had a girth of 17½ inches and weighed 7 pounds 5 ounces.

1937. The two heaviest largemouths ever entered on the Angler Honor Roll were listed that year. A 25-inch fish, with a girth of 17 inches and weighing 8 pounds 12 ounces was taken on plug in Lake Gordon, Bedford county, by Harry Wiltrout of Rockwood. The tying largemouth, also caught on plug in Stillwater Lake, Monroe county, by Frank Kramer, Orwigsburg, was 24 inches in length, had a girth of 18½ inches and weighed exactly the same as Wiltrout's catch.

1938. Stillwater Lake remained in the record largemouth limelight when John Kane of Yatesville, Schuylkill county, caught a fish 23 inches in length, 16½ inches in girth and weighing 7 pounds 12 ounces.

Pickerel

1933. No girth or weight for the 32-inch pickerel topping catches for the year was given. It was taken by John Decker of LaBar's Landing, Lake Wallenpaupack in the lake.

1934. Peck's Pond, Pike county, yielded the record pickerel of the year to Archie Waidelich of Hamburg, Berks county. It was 28 inches in length and tipped the scales at 5 pounds, dressed.

1935. Fishing in Lake Wallenpaupack, Costic Borsavage of Plymouth caught the year's biggest pickerel, a fish 28 inches in length and weighing 6 pounds 4 ounces. The lure used was a live minnow.

1936. A pickerel 28½ inches in length and weighing 5 pounds 10 ounces was top fish in this division for the year. It was caught by Harry Fuls of Bangor.

1937. The largest pickerel ever to be entered in record catches was taken by Frank Streznetcky of Scranton at Shohola Falls, Pike county. A metal wobbler used in conjunction with a dead minnow accounted for this catch. The pickerel measured 31½ inches in length and weighed 8 pounds.

1938. No pickerel recorded.

Wall-Eyed Pike

1933. Two wall-eyed pike, 10 pounds or over in weight, were caught. The Delaware River at Egypt Mills was a setting for the outstanding walleye catch of the season. Trolling with a light rod and using a lamprey eel for bait, John Andrews of Cementon played a pike perch weighing 10 pounds 8 ounces to a finish. It was 32½ inches in length. Crystal Lake yielded a 10 pounder to Rev. Appleton of Philadelphia.

1934. A Delaware walleye that has not been equaled in length and weight was caught by Frank L. Seas of Easton in the Upper Delaware River at Zimmerman's Eddy. With Lake Wallenpaupack producing truly sensational wall-eyed pike fishing that year, fishing so extraordinary that it attracted sportsmen not only from many sections of Pennsylvania, but from neighboring states, it was reasonable to suppose that here the record walleye for the 1934 season would be taken. Five-pound pike were not at all unusual; many six, seven and even eight pounders were caught in the most amazing inland water fishing ever afforded in Pennsylvania. But the catch scored that year by Seas, who was using a lamprey eel and spinner combination at the time, will require an amazing fish from our waters to equal. It was 34 inches in length, 18½ inches in girth and weighed 13 pounds 8 ounces.

1935. A wall-eyed pike caught on a trolling rig in the Upper Delaware River was top fish in this division for the year. Caught by Andrew Anthony, Cementon, this walleye measured 30 inches in length and tipped the scales at 9 pounds.

1936. Safe Harbor Dam on the Lower Susquehanna River produced the record wall-eyed pike taken. It was 27 inches in length, weighed 8 pounds 4 ounces, and was caught by Max Nettke of Lancaster on a plug.

1937. Fishing fly and spinner, William Wasser of Edwardsville tied into and landed the year's record walleye on the North Branch of the Susquehanna River. This fish was 31 inches in length, had a girth of 14½ inches and weighed 8 pounds 8 ounces.

1938. Lake Wallenpaupack yielded the record wall-eyed pike of the year to Leslie Singer of Rafton. It was 30 inches in length and weighed 9 pounds 8 ounces.

Muskellunge

1933. Canadotha Lake in Crawford county produced the first record musky listed, when Walford Larson scored with a "water tiger" 49½ inches in length and weighing 30 pounds.

1934. No muskies entered.

1935. A muskellunge taken in Presque Isle Bay, Lake Erie, by H. D. Hershey assisted by Dr. J. N. Shipley, both of Erie, was top fish in the division. Taken on a trolling rig, it was 51 inches in length, had a girth of 23 inches and weighed 35 pounds.

1936. A Lake LeBoeuf, Erie county, muskellunge was the largest reported that year. Caught by K. Miller of Pittsburgh on a trolling rig, this fish was 46 inches in length and weighed 22 pounds.

1937. Another Lake LeBoeuf muskie was in top position. Taken by Lawrence Burdick of Waterford, Erie county, it was 43½ inches in length and tipped the scales at 25 pounds.

1938. Topping muskellunge taken that season was a 40 pound fish caught by Fred Metz of Meadville in Edinboro Lake, Erie county. It had a length of 52 inches, no girth being given.

HOW TO COOK FISH PROPERLY

Fish boiled: Clean and cut off head, tail and fins. Either whole fish or pieces or 2 or 3 lbs. weight may be used, pinned up in cloth. A small piece of pork may be placed inside the cloth with the fish. Cover with well-salted water and boil slowly until done.

Broiled: Clean and open down the back. Heads, tails and fins of small trout need not be removed. Place in broiler with a slice of pork or bacon across each half. Fish should not be broiled too long as this causes it to dry up and lose its flavour.

Skewered: Skewer a half dozen small fish and as many pieces of bacon or pork, alternately, sandwich fashion, upon a stick and roast.

Roasted: Clean a small fish, thrust a piece of bacon or pork into the belly cavity, salt on the outside and impale on a forked stick by which it is turned often while roasting in front of the coals. In the case of trout and other delicate fish it is better to roast without bacon or pork so that the original flavour may be preserved. When pork or bacon is not used it is well to salt fish both inside and out. Larger fish may be split down the back and roasted on triple-pronged toasters cut from shrubs.

Fried: Sever backbone in several places to prevent curling up in the pan, roll lightly in cornmeal or bread crumbs and fry with sliced bacon or pork. If fish are very small they may be fried crisp and in this case the heads of small trout are not removed.

Baking in Clay: Clay suitable for this purpose is not always available. It is of a blue-grayish color and when wet is easily worked into different shapes. The fish need not be cleaned, but covered completely with clay and buried in the hot coals. If about a pound in weight it should remain in the fire for about three-quarters of an hour. When it is removed the clay is broken and the scales and fins are left adhering to the clay. The entrails will be but a hard mass and will readily drop out when the fish is opened.—Submitted by Fred Swain, Toledo.

—The Ohio Conservation Bulletin.

LAKES POSTED

District Forester T. G. Norris has announced that notices have been posted at Fuller and Laurel Lakes near Pine Grove Furnace, Cumberland County, prohibiting fishing until April 1.

Norris pointed out there is no intent to prohibit swimming and boating and skating at the lakes during the respective seasons of these sports. The ban has been placed on fishing because the lakes are being used as cooperative nurseries by the Department of Forests and Waters, in conjunction with the Board of Fish Commissioners.

They don't come much heavier in our waters than this 50 pound snapping turtle caught in Promised Land Lake, Pike County, by Raymond Smith of Allentown.

SO - O - O BIG

(Continued from Page 9)

prise of my life in the form of a red-head taking them out, all dandies, right in the middle of the day.

Middle Lake was the scene of the surprise attack and the user was a novice who had his own special underhand cast, particularly designed to kill the plug. This beginner seemed to know little or nothing about the finer points of casting and less about fishing. He was alone (he needed a whole boat to cast from) and first he would row awhile and then stand up and "cast".

I had just said to my companion, "Poor fellow. Someone should tell him that a red-head is for night fishing", when "Wham", he had a beautiful strike. My face was redder than the head of his plug. Nor did I feel a whole lot better when he lost the fish.

Not chargrined in the least the novice went back to it. In only a short time he had another strike. This one he landed, a beauty.

Rather shamefaced and muttering something or other under my breath, I sneaked a red-head out of my tackle box.

My companion snickered, saying, "Guess I'll give it a whirl, too".

So we plugged with red-heads at high noon and then we plugged some more. But no bass. On the other hand, our beginner friend continued to get his strikes, losing most but landing some. There must be something to this "beginner's luck" after all.

High Jumpers

If you have ever done much still fishing at night, especially for bullheads in the spring, you have probably had experience with "high jumping" bass.

I have heard a number of anglers tell of bass jumping into their boat while fishing for bullheads. I know that I have had the experience several times and recall one night when it seemed that they would jump in one side of the boat almost as fast as we could put them out on the other. Had they not been of varying sizes we would have thought that it was the same fish, swimming beneath the boat and trying over again. Actually five jumped into our boat that night.

The only explanation I have ever been able to secure is that they are attracted by the light. A friend of mine once held a flashlight over the edge of a boat and was hit full in the face by a big one.

Bass, it seems, are not the only fish, which, at times, fancy themselves birds. Pickerel, even though especially reluctant to put a nose above water, have been known to try it from time to time.

According to a friend of mine, a trout fisherman, trout will do likewise. At least, he claims it happened to him. But instead of jumping into a boat, the story he tells is that it jumped into his waders.

Now, I wouldn't doubt his veracity in the least, but———.

Clearfield County fishermen are anticipating better fishing on their trout stream, Lick Run, which has been improved under the direction of Mr. Pritts, according to J. F. Livingston of Clearfield.

LATE SEASON BASS

One of the most ardent and successful light lure fishermen in the state is A. Armand Acri, Editor and Publisher of The Marietta Times at Marietta. A keen observer on the habits of the bass, he recently reported the following incident which would indicate that late season fishing may yield fine results. The following item appeared in the Times:

A nice late season catch of largemouth bass was made on November 19 by Raymond Ruby, East Front Street, one of Marietta's young artificial bait casting enthusiasts. Raymond succeeded in landing two exceptionally well girthed fish of 15 and 14 inches in length, the larger one weighing about two pounds. The catch was made in a small quarry hole near Lake Grubb. The lure used was a small red and white plug.

Comments Armand:

"I happened to be with him on this jaunt and your suggestion in the current issue of the ANGLER that spring-fed lakes are good for late fall fishing is directly responsible for his catch as we decided to try out this theory. He caught these two fish on two consecutive casts in the same water, the deepest part of the pond, indicating the bass were schooled up for the winter. They were the plumpest largemouths I've ever seen."

They're concentrating on this creative art of fly tying.

JUNIOR CONSERVATION

(Continued from Page 13)

eration in Centre county is made up of State College, Port Matilda, Bellefonte, Howard, Nittany Valley, and Milheim. Junior Clubs have been established in the following places: State College, 160 members; Port Matilta, 40 members; Nittany Valley, 40 members; Pleasant Gap, 47 members; Bellefonte, not known, and Philipsburg, 80 members. The total junior membership is 367. Philipsburg and Pleasant Gap ore not yet affiliated with our County Federation but they are doing excellent work with the young groups.

The spread of Conservation Education to the schools has been through our junior clubs. The education to sportsmanship in hunting and fishing among our Juveniles means the education of many adult violators.

Warden Sam Reed and E. M. Woodward have aided in the junior work.

It is my desire to see every Federated Group of Sportsmen establish Junior Clubs. I will offer my assistance.

THE PIRATE OF PITHOLE CREEK

(Continued from Page 7)

t. And I knew, too, that his tale was essen-ially true underneath the color which the assing years had given it.

Then, almost against my will, I found my-elf fishing all the deep holes in the upper reek, sending my fly flickering under the oots of ancient willows and into the shadows f under-cut rocks, half-expecting to see an ncredibly old, incredibly huge trout roll up ut of the cold dark depths. Captain Kidd till ruled the creek.

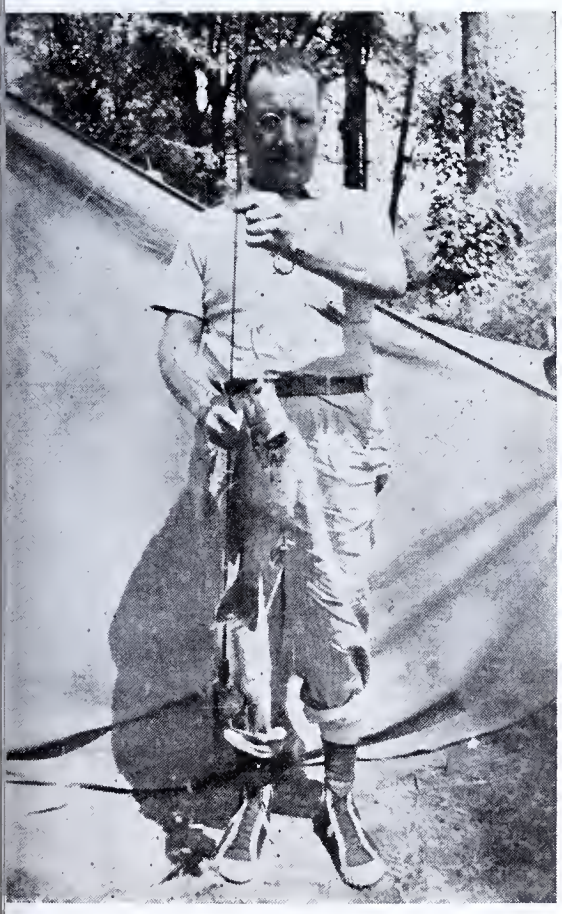
SPICED CARP EN CASSEROLE

2 Pounds Carp.
2 Tablespoons butter.
1 Cup onions diced.
1 Cup carrots diced.
6 Ginger snaps.
1½ Cups warm water.
½ Teaspoon whole mixed spice.
1 Teaspoon salt.
¼ Teaspoon paprika.

Have carp sliced thin, wash and dry. Put ne tablespoon of melted butter into the ottom of baking dish, add one layer of sliced arp, sprinkle with flour, add a layer of nions and one of carrots. Repeat this pro-eedure until consumed.

Soak the ginger snaps in warm water add he whole spices and paprika, stir thoroughly nd pour over the fish and vegetables. Pour he remaining butter over the top, cover and ake in moderate oven until fish is tender.

—Extension Magazine.



A light casting lure accounted for this 17¾ inch Allegheny River smallmouth bass for A. J. Socher of Blawnox.

A good one rose to a No. 18 brown hackle under that leaning pine.

PICKEREL RECORD TIED

A pickerel taken in late September tied the record fish in this classification for the year, the ANGLER learns. Writes Albert Kandra of Philadelphia who made the catch.

"In connection with the summary of largest fish caught in the state during this season", he writes, "I thought it might be of interest to you to know that I caught a 28-inch pickerel weighing 4 pounds 8 ounces during the latter part of September. The story connected with this fish could very aptly be called "Beginner's Luck" and might make interesting reading in your publication, the ANGLER.

"Two veteran fishermen of many years' experience, James Martin of Glenolden and my brother John Kandra of Philadelphia, were going to show me how to catch the big ones on this particular day in September. We drove out to the Delaware Canal at Tullytown and were soon casting our lines. I was using my brother's fly rod and was having a rather difficult time of it as a novice naturally would. His patience finally became exhausted and he asked me to hold his steel rod while he showed me the proper technique to use in casting. I consented and while holding the rod thought I might as well cast in as I could catch nothing with the line out of water.

"The white feather and spinner combination I was using had hardly touched the water when I felt a mighty tug. After quite a struggle of about 10 minutes I landed the fish and were the faces of the two veterans red when measurements and weighing revealed a 28 inch 4½ pound pickerel".

NICE PICKEREL

Harry Warner, nine year old son of Mr. and Mrs. M. N. Warner of Reeders, Monroe County, is a very proud youngster and, is willing to match his ability as a fisherman with any lad his size. Harry was fishing at the Reeders Trout Lake Pond, early in September and his catch included a catfish and a twenty inch pickerel, weighing nearly three pounds.

CONSIDER THE FISHERMAN

He filleth the bungalow with strange contraptions; he getteth his thumbs pierced by fish hooks every time he rummageth through a drawer. He is a sucker for new gadgets. He roameth the sporting-goods stores and peereth into the show cases, gazing at spinners, uttering exclamations over funny feathers and raving over plugs that look like secret fraternity charms.

He littereth the kitchen shelves with reels, leaders, bobs, bait boxes and sinkers. He studieth the tidal tables; he makes a fetish of weather reports. He getteth up in the middle of the night, to the annoyance of his family and neighbors. He dresseth like a cross between a deepsea diver, and the old time horse car motorman, a transcontinental aviator, an oil-well driller and the last of the Mohicans.

He boileth himself a cup of terrible coffee and cooketh himself dog food for breakfast. He driveth miles over bad roads; he loseth his way; he runneth out of gasoline; he walketh back two miles to a pumping station, with farm dogs barking at his heels. He reacheth his destination after trials and tribulations in a mood for snapping at little children. He findeth his tackle snarled. He devoteth most of the forenoon to untangling backlashes, finding the right lure and trying to keep his pipe going in a gale. He eateth a pork sandwich and drinketh a bottle of ginger ale for lunch and wondereth why he feeleth punko.

He spendeth the day pulling one boot after another out of the mud. He falleth on barbed wire entanglements, he jumpeth from stump to stump, he fleeth from the irate property owner, he slippeth on a wet rock and sprain-eth his ankle. He getteth no fish. He forgetteth where he parked his flivver, he find-eth it at nightfall.

The rain falleth in large numbers and he getteth soaked to the oblongata. He driveth home feeling like a bundle of wet wash. He getteth home too late for a nice warm dinner and catcheth cat meat at a dog wagon. He reacheth home with a good case of flu, he developeth pneumonia. He proveth a glutton for punishment.

For what?—*Exchange.*

YOUR TORPEDO HEAD FLY FISHING LINE

(Continued from Page 5)

feet .040"; shooting line, enough .025" to fill reel to capacity.

Light Distance Line. This is one of a series of five distance *fishing* lines I have developed after four years of experimentation. It is the lightest, the most easily handled and the most generally useful of any real distance line I have ever tried. With it under favorable wind conditions I have beaten 140 feet, but this is rare and the best which can ordinarily be expected with so light a line is from 90 to 110 feet. Surprisingly it is quite satisfactory for the shorter casts of average fishing. It can be handled with any rod which will carry the Medium Trout and Bass line.

Tip, 4 feet .035"; front taper, 2 feet *each* .040" and .045"; fore belly, 10 feet .050"; main belly, 10 feet .055"; aft belly, 8 feet .050"; rear taper, 6 feet .045"; holding line, 20 feet .035"; shooting line, enough .025" to fill reel to capacity.

NOTES

Holding Line. Most distance casting is done from a pickup of about 50 feet which may be lengthened during the false casts which proceed the shoot proper. Whether the caster uses the left hand haul or not (tho he should!) the holding line takes a severe beating and should be heavier than the shooting line.

Shooting Line. This needs the same care as the torpedo head—much conscientious greasing, rubbing and graphiting, if *maximum* distance is wanted. Otherwise just grease it occasionally, rub well and wipe off all surplus grease thus avoiding the mess which is so unpleasant for ordinary fishing—but which shortens your cast about 30 feet!

Fitting the Rod. No attempt was made to give the weights of the rods, as weight means little or nothing. A two piece 7½ foot rod with cork reel seat weighing 3 ounces, for instance, might easily transmit more speed and the power to handle a heavier line than another three piece 7½ foot rod with hard rubber reel seat weighing 4 ounces. It's the quality of the cane, its the taper and the workmanship which determines the "action" and potential power of the rod.

The most efficient rod is the one which you can swing at highest TIP speed. Its action and "power" are dependent upon its *effective length*—not its full *static* length, but the chord of the arc formed by the bent rod under full load. Putting it another way, the *effective length* of the rod is not measured along the curved wood, but along the shorter straight line between the grip and the tip guide as shown in fig. 2.

It's this *effective length* of the rod (made short by inertia and wind resistance) which controls the *tip speed*, and it's the net result of these two (and not the static length and weight of the rod) which must be *fitted* with the line if maximum distance is to be obtained. If maximum distance is not required, you *can* use a somewhat lighter line, fitting it to the fishing rather than to the rod. The result will be entirely different, of course, because the lighter line will not develop the time lag essential to care free casting, but the difference will be much less noticeable with a torpedo head line than it will be with too light a double tapered or level line.

Table of Line Sizes

.025" is usually called H
.030" is usually called G
.035" is usually called F
.040" is usually called E
.045" is usually called D
.050" is usually called C
.055" is usually called B
.060" is usually called A
.065" is usually called AA
.070" is usually called AAA
.075" is usually called AAAA

Unfortunately there are no standard diameters for lines, each manufacturer adopting standards of his own. The diameters shown above, however, are approximately correct for most American lines and at least one factory makes an effort to adhere to them. To be on the safe side order your line in thousandths of an inch rather than by letter size. The chain stores sell a small micrometer at twenty-five cents (!) which is accurate to a thousandth and therefore more than good enough for measuring line and gut sizes. Don't use too much pressure when screwing down as this will flatten the line against the anvil and give a reading several thousandths too low.

Greasing the Line

Even lines of .055" are rather hard to keep afloat and should be greased daily in warm weather. Lines of .060" should be greased several times per day if necessary, and *all lines should be dried out before greasing.* Lines heavier than .065" are hopeless unless religiously greased, well rubbed down and graphited. These heavier lines are indispensible for greatest distances and tournament casting, but they are a headache to keep in condition and are not necessary for any fishing to be found in Pennsylvania or nearby states. In fact, they are seldom necessary even for salmon and steelhead streams—if the fisherman knows how to cast!

Use the hardest grease you can find. *Pure* animal fats, high in stearine, will hurt neither the silk nor the dressing of the line, but they wash off easily. Ordinary paraffin wax lacks adhesion. Beeswax and the newer high melting point waxes of mineral origin are too sticky to allow the line to slip through the guides. I've tried everything and come to the conclusion that the right grease *must* be a mixture. So far as I know there isn't a really good one on the market. Maybe I'm too fussy. If so more than 30 years of fly fishing made me that way. At any rate I make my own. It must not only be good for the line, but it must make the line slip easily through the guides and it must keep the line waterproof for at least two days in cool weather—even in the heavier line sizes.

For ordinary fishing you need only grease the torpedo head and holding line, leaving the shooting line unsoiled. But grease thoroughly, applying the grease by pulling the line through a small piece of folded leather. After annointing the whole line, rub it briskly—not enough to raise a dangerous heat (you'd be surprised how quickly it gets hot) but enough to melt the grease and fuse it into the line. Finally wipe the surplus grease off with your fingers, keeping your fingers clean by occasionally rubbing them in your hair or wiping them on your good pants.

For distance casting grease the entire line, including shooting line, as described above. Then finish off with finely powdered graphite bought from a good hardware store or mill supply house. Use a piece of felt or several thicknesses of muslin for rubbing in the graphite, and polish until the line is as sleek as a mirror. Tournament casters spend hours working on their lines and it pays them big dividends both in casting and in floating properties.

A Kansas editor says that fifty years from now kissing will be a thing of the past. Fifty years from now we also may be a thing of the past, so hang up the mistletoe, girls!

A newspaper item tells of a woman who used the telephone the other day for the first time in 25 years. Maybe she was on a party-line.

Casey Yocum of Lewistown with a fine catch of smallmouth bass he scored in the Juniata River, Mifflin County. Largest bass in the catch was 19 inches in length, according to Special Warden Harry Baumgardner, Lewistown.

A. HUNTER WILLIS

In Memorium

It seems hardly possible that within a few weeks the Game Commission and the sportsmen lost two of their best friends: Former Commissioners A. Hunter Willis, of Erie, who passed away during a serious major operation in Philadelphia on October 24, and J. August Beck of Williamsport, who died suddenly at his home in Duboistown Sunday evening, November 12. Both men rendered invaluable service to the Commission and to the sportsmen during their tenure of office and continued their interest in the State's conservation program after their commissions expired. Both were former officers and active members of various sportsmen's associations and contributed much of their time, money and effort in behalf of the State's wildlife program. Their contributions to the cause were many and will be long remembered by their sportsmen friends and associates throughout the Commonwealth. With the deaths of Mr. Willis and Mr. Beck 19 of the 43 men who have served on the Commission to date have passed away.

Pennsylvania Game News.

J. AUGUST BECK

RANDOM NOTES ON TROUT FLIES

(Continued from Page 3)

erably more often than any of the others, and due to its abdomen being crammed with eggs, clear up to the thorax, trout find it an exceptionally juicy morsel.

The Red Quill (Imago)

Iron pleuralis, the Red Quill, is one of the earliest mayflies to appear, and if the weather is propitious, it may be noticed over the water on the opening day of the trout fishing season, that is, April 15th. I have specimens in my collection from Hammersley Forks, Middle Creek, Young Womans Creek, Fishing Creek, Lancaster County and Fishing Creek, Sullivan County, from which it will be seen that it is fairly well distributed throughout the state. Due to its early arrival over the water, the imitation should be tied and fished wet. Description and imitation follow:

Description, Male Red Quill, (Imago): Length of wings, about three eighths of an inch; length of body, about three eighths of an inch; wings, clear and glassy; tails, two, deep red brown; legs, pale reddish brown, with dark bands on the femora; front legs, longer than the body; abdomen, red and brown, conspicuously ringed.

Imitation, Red Quill: Hook, No. 12; hackle, dark red brown, commonly known as red; wings, starling; body, quill, dyed red; tail, red hackle fibres.

The Yellow Spider

This small cranefly, *Antocha saxicola*, is widely distributed, and will be found on almost all the large, slow moving, trout streams, throughout the state. It is in season from May 15th onwards, and seems to be most active on cold rainy days.

Description, Yellow Spider: Length of wings, one fourth to five sixteenths of an inch; length of body, the same; wings, pale faint yellow, sometimes clear and glassy; tails, none; legs, pale yellowish red, about three fourths of an inch long; abdomen, yellow.

Imitation, Yellow Spider: Hook, No. 16, short shank; hackle, ginger, (long); wings, fine hackle tips, stained a pale yellow; body, yellow crewel wool.

The Fish Fly

Chauliodes serricornis, the Fish Fly, is found on almost every trout stream, and is in season from May 20th, on until the second week of June. Its antennae are quite long and serrated, whence its name.

Description, Fish Fly: Length of wings, one and one eighth, to one and three eighths of an inch; length of body, seven eighths to one inch; legs, light blackish brown; abdomen, blackish brown; antennae, about three fourths of an inch long, black and serrated; wings, black, with conspicuous white patches.

Imitation, Fish Fly: Hook, No. 6, long shank; hackle, dark dun, or a light blackish brown; wings, black and white, turkey; body, a dubbing of black and brown wool.

The Spotted Sedge

The Spotted Sedge, *Hydropsyche slossonae*, or *H. alternans*, is one of our most common caddis flies, and is found on almost all of our trout streams. It is distributed throughout Wisconsin, New Hampshire, Washington, D. C., Newfoundland, and Hudson Bay. The larva, a bright green worm with black head, is one of the net spinning caddis worms, and can be found in a loosely built structure of debris, fastened to the underside of stones on the stream bed. The adult insect, resembling the European Grouse Wing, trout fly, is found over the water from the beginning of June, until the end of the trout fishing season.

Description, Spotted Sedge: Length of wings,, about three eighths of an inch; length of body, one fourth to five sixteenths of an inch; wings, greyish brown, and spotted with golden yellow; legs, yellowish brown, with conspicuous spurs; abdomen brownish; antennae, yellowish brown.

Imitation, Spotted Sedge: Hook No. 14; hackle, ginger; wings, grouse, (English); body, yellowish brown wool.

This fly should be tied and fished wet, for the female often descends beneath the surface of the water to lay her eggs.

THIS ONE ENTERED

Harry Lucas, Wesleyville barber, who caught a smallmouth bass weighing nearly four pounds off Four-Mile Creek, Lake Erie, only to be unable to enter it in a contest because he was not registered, caught another one, weighing 2½ pounds a short time later.

Lucas, being registered this time, is practically assured of a prize. Both fish were caught on a June bug spinner and night crawler. Lucas was accompanied in each instance by Mr. Whalen, Marvintown; Doc Allison, Ray Peters and Raymond Lucas.

OUTSCORES VETERANS ON TROUTING TRIP

John, the 11-year-old son of Mr. and Mrs. Philip Henning of Stroudsburg, was one of the happiest trout fishermen of the community last spring. He made a trip to Fern Ridge where he caught three trout in Tunkhannock Creek, measuring 14, 15 and 16 inches each.

The lad made the trip with his father and two uncles, Red and Arthur Henning, and as luck would have it, John was the most successful of the party.

NATURE'S WARNING

By CHARLES STAMBAUGH

A trout was leaping for an occasional fly on the surface of the quiet waters of Hogestown Run on a recent May morning. Above, a giant oak tree, fully three feet in diameter, spread its leafy branches over the stream. Being out for trout, naturally my attention was attracted to the spot where this particular fish was feeding. I waded quietly up to a point from which a fly could be cast to the apparently hungry trout.

After several casts, a distinct cracking sound, as of the parting of wood, came from the giant tree above, and upon glancing upward, I noticed that the oak had begun to split through the center of the trunk, the break being quite obvious toward the top.

"Crack!" The creaking sound came more frequently as my casting continued and the trout refused to be fooled. There was almost no air going, which made the sound from the tree all the more mysterious. The sky was cloudy but no evidence of an approaching storm was in sight.

"Well, it will not take much of a wind to bring that tree down," I thought, as I continued to cast the fly under the big tree.

"Crack!" The sound continued and I began to wonder whether there was not a good chance for at least half of the tree to fall quite soon, without waiting for a storm. So, as a precautionary measure just "in case" something might happen, I moved slowly back from the big oak toward the opposite bank. And none too soon.

Just as I had completed another cast of the fly under the tree, one more terrific, cracking sound came from above, and suddenly the entire half of the tree overhanging the stream crashed violently down to the water in front of me, missing me entirely, but coming sufficiently close to splash water over me. My line was caught under the fallen tree but was easily removed, so that both fisherman and equipment escaped undamaged.

Now, there is nothing very much unusual about a tree, even a large one, falling within reach of a fisherman. I presume this has happened many times. But the point is, that in this particular case, the creaking sound of the big oak before it fell served as sufficient warning to a fisherman under the tree to prevent an accident.

Nature seems to have a peculiar, yet gracious, way of sounding some form of warning before danger to humanity strikes. This is evident in many other instances of actual human experience outdoors. It is said that if circumstances possibly permit, a rattlesnake always sounds its warning rattle before striking with poisonous fangs.

On a previous occasion, this mysterious warning of Mother Nature also came my way, although in somewhat milder form. I had seen several trout one May evening under a large buttonwood tree sheltering a portion of Silver Spring. Leaning against the trunk of the tree, deeply intent upon trying to interest the trout in a black gnat during the few remaining minutes of daylight before darkness interfered, I paid little attention to a bird that began flying down close to my head, angrily snapping his bill with each approach. The bird, a screech owl, came closer with each successive flight, but in my anxiety to catch a fish, I paid no attention whatsoever to his antics, although the loud snapping of his bill, characteristic of the owl family, continued to sound in my ears.

Finally, the screech owl's patience having apparently come to an end, he decided to strike. And strike he did. Bang! I felt a decided blow on the side of my head, above the ear. The owl had swooped down and, his warnings unheeded, struck the offending object with the full force of his body in motion. The effect was felt for another half hour by the disobedient victim. Lost in the thought of fishing, I had neglected to notice that I was blocking a hole in the trunk of the tree which undoubtedly harbored the nest of the screech owl, and the bird could not get into its eggs or young.

Again, Nature had given its warning before an approaching danger. Whether this warning is always forthcoming in the out of doors, I would not presume to say. But, from our limited experience in this connection, one cannot help but feel that somewhere in the plan of Nature, there exists some unwritten law whereby a warning is given before harm is inflicted. Our painful experiences are probably caused on many occasions by our failure to be sufficiently alert to receive and heed these danger signals. However that may be, I am certain of the fact that, had the giant oak not creaked its sinister warning, I would have been caught under the falling tree.

GATEWAY JUNIORS PLAN FINE PROGRAM

More momentum was given to the steady progress of the new DuBois Gateway Sportsmen's Association when the junior department was organized and started on a program of action at a meeting held at the J. E. DuBois Fire House.

Showing most encouraging enthusiasm and a comprehension of the part they will play in helping to make the organization an effective representative of the sportsmen of the community, the youngsters organized by the election of the following officers: President, William Lawn; Secretary, Tom Kirkwood, and Treasurer, Al Crawford.

The new president surprised the senior members by delivering a pep talk and outlining possible plans for action by the juniors. Plans were laid for a program of shelter construction to be started immediately so that they will be ready for service when winter closes in, and the juniors also explained plans for keeping the shelters supplied with food for game birds and animals. Later on the juniors plan to procure fruit and nut trees from the Game Commission and carry on plantation in accordance with the methods approved by the commission.

Meanwhile, the senior organization launched plans for establishing a wildlife refuge nearby, to be sponsored by the organization in conjunction with the State Game Commission. Several possible tracts are in view and favorable negotiations are being carried on for procuring leases. The negotiations are to be rushed in an effort to have the refuge established before the coming hunting season.

The organization will cooperate with a group of farm land owners in operating the refuge.

Announcement was made that tanks of bass and catfish were stocked in Sabula Lake.

Meanwhile, reports were received that the membership campaign is getting under way and numerous workers are enrolling sportsmen in the organization's effort to roll up an enlistment of 1,000.

YORK HAVEN ACTIVE

Hats off to the York Haven Game and Fish Association which was organized around the first of the year and which secured, as of March 15, a membership of over 365. What's more this club has an active program already underway, including farm game projects, game refuges, winter feeding, public relations, youth education, etc. It has set its membership goal at 500, and if it keeps on going the way it has been in the past few months it will make it easily.

Two trout on one cast was the feat accomplished during the past trout season by Robert Martin of Ligonier while fishing in the Loyalhanna Creek. The trout measured 10 and 11 inches respectively.

"Bud" Steele, son of the steward of the Lehman Lake Rod and Gun Club with two nice smallmouth bass, 14 and 15 inches in length, taken on artificial lures by M. R. Harpster of Allentown.

Scotts Ponds at Bridgeville, Allegheny County.

FISHING LICENSE FEE INCREASE FAVORED

Reiterating the full opinion of local sportsmen's organizations, the annual meeting of the Southeastern Division, Pennsylvania Federation of Sportsmen's Clubs held all day yesterday in the Social Center, Doylestown, unanimously approved a 50-cent increase in the cost of a fishing license, provided the extra money received be earmarked for the acquisition and direct improvement of public fishing waters.

The same idea championed by Senator Oscar J. Tallman and backed by the Lehigh Federation was narrowly defeated in the last session of the State Legislature by only five votes. As intimated last evening by Charles A. Rowe, 63 Ashland Street, Doylestown, president of the division, the fishermen will renew their efforts in behalf of the move.

Representatives from Berks, Bucks, Chester, Delaware, Lehigh, Montgomery, Northampton, Philadelphia and Schuylkill counties met at Doylestown to consider and vote on conservation matters to be presented before the coming state gathering in Harrisburg. By-laws were amended to exclude any officer in in the division unit from holding any elected or appointed position in the State government.

Resolution as approved at the meeting included:

1. Increase the present bounty on the weasel from 50 cents to one dollar.

2. By a vote of six counties to three, the division endorsed the stand that all fishing be prohibited on streams approved and stocked by State trout from March 1 on any year to the opening of the trout season.

3. Prohibit the removal of fish bait and bait fish from any stream regularly approved and stocked with state trout.

4. Prohibit the killing of raccoons during the open season between the hours of 7 A. M. and 5 P. M.

5. Create or purchase an established trout hatchery in the southeastern part of the state. Under the present system of the Pennsylvania Fish Commission there are no trout production units in the southeastern part of the commonwealth.

6. Increase the fishing license by 50 cents, provided the extra money is earmarked for the acquisition and improvement of public fishing waters.

7. Consideration of the raccoon as a game animal only.

8. Continue, as at present, the taking of sunfish and yellow perch throughout the entire year.

9. Endorse a federal move to place the rock fish or striped bass of our eastern coastal waters as a strictly game fish to be taken only with the hook and line.

Official county representatives were: Berks, Oscar Becker, L. S. Deeter, John Rothermel and Earl Heffner; Bucks, Charles A. Rowe and E. T. Balderston; Chester, Norman W. Wood, John Kenworthy and Everett G. Henderson; Delaware, L. F. Manning; Lehigh, Robert D. Dreisbach, C. Robert Glover and Charles H. Nehf; Montgomery, Frank Clamer and E. F. Brouse; Northampton, E. D. Haehnle; Philadelphia, William D. Burk; Schuylkill, Dr. A. M. Miller, Harry J. Reinmiller and Blair Egge.

Presents make the heart grow fonder.

OPENING DAY CATCH AT ARIEL

A Carbondale angler, Fred Wright, and his nephew, Harold Wright, Lake Ariel, probably were two of the most contented of the host of opening day fishermen in this section, reports the Carbondale Leader.

Bright and early on the first morning they began plug casting at Lake Ariel. Before 7 o'clock they had caught eleven largemouth bass. Mr. Wright had five beauties safely aboard when he decided that enough was enough. His nephew had the limit of six.

The former showed his catch to some friends at the Leader office. The largest would weigh in at about three and one-half pounds. The others ran close to three pounds each. Those caught by his nephew, he said, varied slightly more in size, some of them running smaller.

Prize catch among Mr. Wright's five was the heavyweight of the group. Obviously he was a veteran of the wars. A scar obviously old but not completely healed, marked his underjaw. A fresher gash had been torn in the side of his mouth. There was a hook mark on his side.

Asked the reason for the success of his expedition, Mr. Wright attributed it to the use of a special type of plug bait.

"It never fails to take fish out of Lake Ariel," he said.

DEEPLY HOOKED TROUT

Writes Joe Glacken of South Fork:

"I've often read and heard about bass being able to get rid of a hook if it was left in its mouth but never anything about trout being able to dispose of a hook in the same manner. I am enclosing a hook that I took from the stomach of an eight inch brown trout. The hook was in the stomach the same as though it was swallowed as food. It had a short piece of gut attached which was just a fraction of an inch long, the bend of the hook pointing toward the tail of the fish".

"Whatever troubles Adam had, and he had plenty, pards, he never had to help his wife address the Christmas cards!"

Fine trout water. Big Bushkill Creek above Resica Falls in Monroe County.

DRAGONFLIES FOR SMALLMOUTHS

(Continued from Page 11)

Generally, the characteristics of a good fly line are: softness, smoothness, flexibility, and a long life if properly cared for.

Level lines are very satisfactory in casting heavy or wind resisting bass lures and their low price makes them quite popular with many fishermen.

The superiority of the torpedo head line for this type of fishing, however, cannot be disputed. The ease with which long casts can be made with this line is an outstanding quality.

The question of reels, especially their weight, has never been particularly bothersome to me. In my opinion a reel can either be too heavy or too light. When it is too light, it will allow the rod butt to swing upward freely on the forward cast, which is to the caster's advantage, but on the back cast, that lightness prevents the rod butt from going down. The reverse is true of a reel that is too heavy. On the forward cast the weight prevents the butt from going up, but on the upward cast the weight forces the butt down. To overcome these tendencies, the reel should weigh enough to allow the rod butt to come up with the same ease as it goes down.

My preference is the single action reel.

Leaders, I have been convinced, are very important tackle items. A leader is very prominent in presenting a lure to the fish in a delicate, realistic manner without arousing their suspicions. Upon it depends the success of what our tackle and stream tactics applied collectively are seeking, which is to catch fish. Therefore why not give leaders all the consideration due them?

Quite frequently this past season the value of a long leader was demonstrated to me. Usually I started fishing with a six foot leader as an experiment. Most of the time (in clear water) the best I could do with a six foot leader was to make the fish stop feeding. A change from the six to a twelve foot leader turned failure into success.

When fishing discolored water, a six foot leader will usually suffice but as it clears and becomes low, longer leaders are very essential.

Fairly heavy leaders were quite practical for dragon fly fishing, although lighter leaders were sometimes called into use in very clear water.

My favored lure is, of course, the dragon fly. It is tied on humpshank hooks with buckhair wings and a chenille body. Brown wings with a black body proved the best combination for clear water. A pure black fly worked very well in discolored water.

Before going into the actual use of the dragon fly, I wish to say a few words about approaching prospective water and wading.

In the first place, if we wished to approach within shooting range of a deer it would be considered a blunder to go stumbling, stumping and crashing through the mountain towards the animal. Yet many persons do this very thing in approaching a bass hole. Many people who in other respects are more than just average fishermen in this respect handicap themselves to a great extent. It must be admitted that at times fish can be taken in spite of disturbing the water, etc., although this is the exception, rather than the rule. At least a reasonable amount of caution should be exercised in approaching a pool, especially when the water is low and clear.

Wading, unless the stream cannot be fished in any other way, should not be undertaken. If necessary (which it many times is) to wade a stream, it should be done very slowly and carefully to avoid disturbing the water surface and stream bed. After reaching the desired point it is well to wait a few minutes before starting to fish.

Fishing the dragon fly becomes a simple matter after a little practice. I prefer to fish it across stream and retrieve it slowly in very short jerks, allowing a few seconds between each jerk. Many strikes occur just as the fly hits the water and if not it should be allowed to sink three or four inches before starting to retrieve. When fishing cross stream, I have found it productive to allow the fly to light on the water as near the opposite bank or shore as possible.

I have even gone so far as to cast it on brush or weeds on the opposite shore and then pull it off into the water. At times bass can be induced to strike by false casting over the water a few times, then shooting the fly high into the air and allowing it to fall on the water.

Plugging in Maple Beach Lake, Leopold Biskup caught this fine 16¼ inch largemouth bass.

Besides catching smallmouth bass on the dragon fly, I have taken a large number of fine fallfish and sunfish with it. A few pickerel have also been taken on it.

So far the talk has been only of catching fish but in the cause of conservation, I wish to say that ninety-five per cent of all the bass I took this season were returned unharmed to the water. Several friends did likewise. In order that our fish stocking, predator controlling, stream improvement, etc., be successful, it is absolutely essential that we have sportsmen who are willing to forget the glory of catching fish and look to future sport.

Save some fish today for an enjoyable day later on.

Snow Hill Lake in Monroe County formed by the dam constructed by the CCC in 1934.

FLOWERS FOR ELLA

The ANGLER is always happy to receive comments from its readers concerning articles appearing in this magazine and we certainly string along with J. W. Gebhardt, M.D., of Mt. Lebanon, Pittsburgh, in handing this verbal bouquet to our youngest contributor, Ella A. Socher for her splendid story "Going Fishing".

Writes Dr. Gebhardt:

"Ella A. Socher's November story "Going Fishing" deserves a big vote. The story is quite true to the ways of a fisherman getting ready for a little trip and written in such a humorous kind of way that one can't help reading on. Also, quite a few helpful hints are contained in it, which will come in handy when planning a little trip. Ella certainly put it over nicely".

INCREASING FISH PRODUCTION IN PONDS

(Continued from Page 18)

methods for doing this must be developed if fish are to be grown for increasing numbers of fishermen.

Extensive tests in ponds in Auburn have shown a direct relation between the amount of plankton produced in the water and fish production. When the amount of plankton was doubled, the pounds of fish produced per acre was also doubled (Smith and Swingle, 1938). Increasing the plankton content of pond waters therefore appeared to be one method of increasing fish production.

Experiments by the authors (Swingle and Smith, 1938a) indicated that plankton production could be increased by the use of commercial fertilizers. Experiments, conducted in glass jars which contained distilled water, indicated that phytoplankton required nitrogen, phosphorus, potash, and lime in the ratio 4-1-1-8 (an N-P-K-Ca C03). When used in many ponds it was found necessary to double the amount of phosphorus due to precipitation of this element by iron and colloidal material in the water. For actual pond use the following mixture, based upon the above ratio, has been extensively used with good results in Alabama:

40 lbs. sulfate of ammonia
60 lbs. acid phosphate (16 per cent)
5 lbs. nuriate of potash
15 lbs. finely ground limestone or 30 lbs. basic slag.

These amounts were used per acre of water at each application. Best results were secured when these materials were mixed just before using. Similar results were secured by using 100 pounds of commercial 6-8-4 (N-P-K) fertilizer—10 pounds of nitrate of soda per acre per application. The fertilizer mixture was applied often enough to keep a deep green color in the water. At Auburn, this required about ten to fourteen applications, beginning in March after danger of spring floods was past, and continuing till October. Applications were made at three-to-six-week intervals.

For small ponds, 2 acres or less in size, the fertilizer was applied by walking around the edge and broadcasting towards the center of the pond. No attempt was made to thoroughly cover the ponds, as wave action can be depended upon to do this. Care was taken that none of the fertilizer fell at the water edge as this would encourage the growth of weeds. For larger ponds, the fertilizer was broadcast from a boat in the area from 1 to 5 feet in depth.

Unfertilized ponds up to 2 acres in size at Auburn have produced from 100 to 200 pounds of game and pan fish per acre of water. Ponds up to 1 acre in size, fertilized according to the above procedure, have produced as high as 580 pounds per acre in one year, at a cost for fertilizer varying from 3 to 6 cents per pound of fish produced.

If it is desired to produce more pounds of fish per acre of water, fertilizer should be used. However, even in fertilized ponds there is great danger of overstocking (Swingle and Smith, 1938b); for best results, a pond must be properly stocked as well as properly fertilized (Plate 2).

Summary

Experiments were conducted on fish production by stocking ponds with definite numbers of fish at the beginning of each experiment and draining the ponds and counting and weighing the fish present at the end of the experiments.

Heavy stocking of ponds did not result in increasing the pounds of fish produced per acre of water, but did because the average size of the fish.

Stocking with large fingerlings gave no better results than stocking with smaller fish, except in the case of overstocked ponds. The pounds of fish per acre present at the end of the experiment was proportional to the food production in the pond, regardless of the size of fish used in stocking.

Fish production in ponds was increased only by increasing the food supply for the fish. The most efficient mixture of commercial fertilizers for increasing fish food was as follows:

40 lbs. sulfate of ammonia
60 lbs. acid phosphate (16 per cent)
5 lbs. muriate of potash
15 lbs. finely ground limestone or 30 lbs. basic slag

The above amounts were used per acre at each application and best results were secured by mixing these materials just before they were used.

Ten to fourteen applications per year were required for maximum fish production. In ponds of approximately an acre in size, a total yield of 140 pounds of fish per acre in unfertilized ponds and 580 pounds of fish per acre in heavily fertilized ponds was secured.

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1938. Lake management reports. 1 Horseshoe Lake near Cario, Ill. Ill. Nat. Hist. Survey, Biological Notes No. 8, 6 pp.

TABLE 1.—FISH PRODUCTION IN A 1.8 ACRE UNFERTILIZED POND WITH DIFFERENT RATES OF STOCKING

	Fish used in Stocking Pond in February				Fish Recovered on Draining Following November			
	— 1935 —		— 1936 —		— 1935 —		— 1936 —	
	No.	Wgt. lbs. ozs.	No.	Wgt. lbs. ozs.	No.	Wgt. lbs. ozs.	No.	Wgt. lbs. ozs.
Huro salmoides (largemouth black bass)	....	.....	4	6— 1	.....	.....	3	8— 2
Micropterus coosae (red-eye bass)	29	7— 0	...	.....	31	15— 3	.....	.....
Helioperca macrochira (bluegill bream) and Eupomotis microlophus (orange-ear bream)	3,638	13— 9	10	1—12	16,022	124— 4	21,827	72— 8
Pomoxis annularis (white crappie)	....	.....	10	4— 2	.....	.....	3,780	36— 2
Ictalurus furcatus (channel catfish)	....	.....	2	4— 4	.....	.....	2	5— 4
Ameriurus natalis (yellow bullhead)	298	11— 6	10	4— 4	1,312	75—13	2,060	99— 9
Erimyzon oblongus (chub sucker)	520	8—10	200	4— 0	4,704	78— 0	2,733	74—15
Totals	4,485	40— 9	236	24— 7	22,069	293— 4	30,405	296— 2

"Conservation is a vital need for young and old, lad! There were trout here when I was a boy."

Part of a stone rip-rap wall. These walls are to be used throughout the project.

STOCK CATFISH

The North Eastern Lancaster County Rod and Gun Club purchased one ton of catfish which were used to restock their local streams according to J. Elmer Zimmerman, secretary.

These fish in bulk amounted to 38 bushels and in size ranged from six to 18 inches.

Because of weather conditions and the manner in which they were transported, less than a dozen were found dead when placed in the streams.

FISH STORIES

Noah an' Jonah an' Cap'n John Smith,
Mariners, travelers, magazines of myth,
Settin' up in Heaven, chewin' and a-chawin'
Eatin' their terbaccy, talkin' and a-jawin';
Settin' by a crick, spittin' in the worter,
Talkin' tall an' tactless, as saints hadn't orter,
Lollin' in the shade, baitin' hooks and anglin',
Occasionally friendly, occasionally wranglin'.

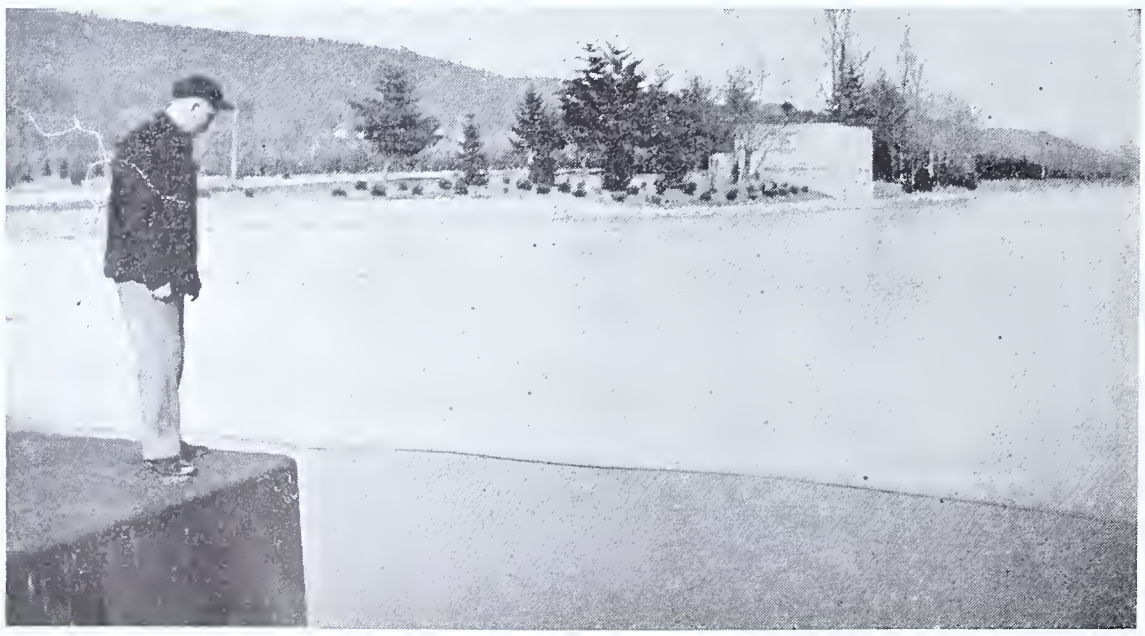
Noah took his halo from his bald head
An' swatted of a hoppergrass an' knocked it dead,
An' he baited of his hook, an' he spoke an' said:
"When I was the Skipper of the tight leetle Ark
I useter fish fer porpus, useter fish fer shark.
Often I have ketched in a single hour on Monday
Sharks enough to feed the fambly till Sunday—
To feed all the sarpints, the tigers an' donkeys,
To feed all the zebras, the insects an' monkeys,
To feed all the varmints, bears an' gorillas,
To feed all the camels, cats an' armadillers,

Clubhouse of the Tamaqua Rod and Gun Club which is sponsoring the trout raising project. The club will plant thousands of young trees about the project.

To give all the pelicans stews for their gizzards,
To feed all the owls an' catamounts an' lizards,
To feed all the humans, their babies an' their nusses,
To feed all the houn' dawgs an' hippopotamusses,
To feed all the oxens, feed all the asses,
Feed all the bison an' lettle hoppergrasses—
Always I ketched, in half an hour on Monday
All that the fambly could gormandize till Sunday!"

Jonah took his harp, to strum and to string her,
An' Cap'n John Smith teched his nose with his finger.
Cap'n John Smith, he hemmed some an' hawed some,
An' he bit off a chaw an' he chewed some and chawed some:
"When I was to China, when I was to Guinea,
When I was to Java, an' also in Verginney,
I teached all the natives how to be ambitious,
I learned 'em my trick of ketchin' devilfishes.
I've fitten tigers, I've fitten bears,
I have fitten sarpints an' wolves in their lairs,
I have fit with wild men an' hippopotamusses,
But the perilousest varmints is the bloody octopusses!
I'd rub my forehead with phosphorescent light
An' plunge into the ocean an' seek 'em out at night!
I ketched 'em in grottoes, I ketched 'em in caves,
I used fer to strangle 'em underneath the waves!
When they seen the bright light blazin' on my forehead

Main water supply dam which will be used to feed the different pools. The water sluice gate is constructed of stone and reinforced concrete.



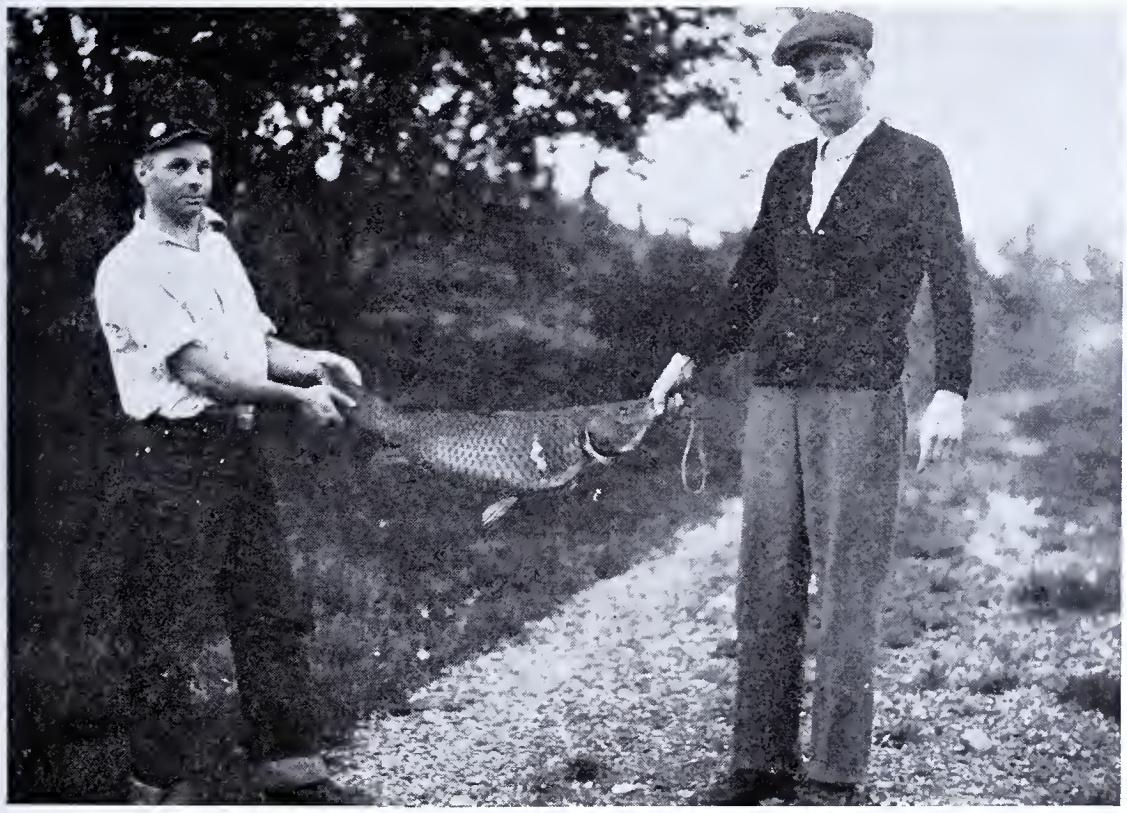
Owl Creek Reservoir which feeds the main supply dam of the trout hatchery of the Tamaqua Rod and Gun Club. This reservoir is Tamaqua's drinking water supply, situated in the Owl Creek Valley.

They used fer to rush at me, screamin' something horrid!
Tentacles wavin', teeth white an' gnashin'!
I uster grab 'em as they rushed from their grots,
Ketch all their legs an' tie 'em into knots!"

Noah looked at Jonah, an' said not a word,
But if winks made noises, a wink had been heard.
Jonah took the hook from a mudcat's middle
An' strummed on the strings of his hallelujah fiddle;
Jonah give his whiskers a back-hand wipe
An' cut some plug terbaccer an' crammed it in his pipe!
—(Noah an' Jonah an' Cap'n John Smith,
Fisherman an' travelers, narreratin' myth,
Settin' up in Heaven all eternity,
Fishin' in the shade, contented as could be!
Spittin' their terbaccer in the little shaded creek,
Stoppin' of their yarns fer ter hear the ripples speak!
I hope fer Heaven, when I think of this—
You folks bound hellward, a lot of fun you'll miss!)
Jonah, he decapitates that mudcat's head,
An' gets his pipe ter drawin'; an' this is what he said:
"Excuse me ef your stories don't excite me much!
Excuse me ef I seldom agitate fer such!
You think yer fishermen! I won't argue none!
I won't even tell yer the half o' what I done!
You has careers dangerous an' checkered!
All as I will say is: Go and read my record!
You think yer fishermen! You think yer great!
All I asks is this: Has one of ye been 'bait?
Cap'n Noah, Cap'n John, I heerd when ye hollered;
What I asks is this: Has one of ye been swallered?
It's mighty purty fishin' with little hooks an' reels,
It's mighty easy fishin' with little rods an' creels.
It's mighty pleasant ketchin' mudcats fer yer dinners.
But this here is my challenge fer saints an' fer sinners,
Which one of ye has v'yaged in a varmint's inners?
When I seen a big fish, tough as Methooslum,
I used for to dive into his oozly-goozlum!
When I seen the strong fish, wallopin' like a lummicks,
I useter foller 'em, dive into their stummicks!
I could v'yake an' steer 'em, I could understand 'em,
I useter navigate 'em, I useter land 'em.
Don't you pester me with any more narration!
Go git famous! Git a reputation!"

—Cap'n John he grinned his hat brim beneath,
Clicked his tongue of silver on his golden teeth;
Noah an' Jonah an' Cap'n John Smith,
Strummin' golden harps, narreratin' myth!
Settin' by the shallows forever an' forever,
Swappin' yarns an' fishin' in a little river!
—From the writings of the late Don Marquis in The New York Sun.

One of the most famous trout streams in Pennsylvania is Brodheads Creek, Monroe County. Shown here is the stream at Stokes Mill.



Jule Dubois and Joe Johnen of McDonald with a big carp taken in French Creek.

BIG CARP

Believed to be the largest carp taken from the Allegheny River last season a 22-pound specimen was caught by John Rehak, of Ford City. Rehak made his catch on the other side of Works Six, opposite the Eighth street pumping station. A favorite spot for anglers, it has yielded many other fine catches. Typical was the same day's catch for Charles Driver, who bagged four suckers and two rock bass, all good sized.

ON CLEANING FISH

Writes Benjamin F. Horner of Doylestown:

"Would like to pass a tip along to fellow anglers as to preparing our fresh water fish for the pan. Instead of just removing the scales try skinning them. Any muddy taste that might have previously been noticed in our fresh water fish will be entirely gone and they make a dish when baked or fried fit for a king".

BIG SNAPPER

Speaking of snapping turtles, they don't come much bigger than the one taken by Raymond Smith of Allentown, at Promised Land Lake, Pike County, last May. The big turtle, an ace predator on fish life, tipped the scales at 50 pounds.

"This turtle was caught by hand on one of the small feeder streams that feeds the lake at Promised Land", he writes.

HERE AND THERE IN ANGLERDOM

The following splendid report from Warden Russell J. Womelsdorf of Kingston indicates that Luzerne County anglers scored heavily on Pennsylvania waters during the 1939 fishing season. The report follows in detail:

Harold Llewellyn, 202 S. Franklin St., Wilkes-Barre, caught a largemouth bass, weight 6¼ pounds, length 22½ inches, in Stillwater Lake, using a live minnow, on July 8, 1939. J. C. Milligan, Wyoming, caught a largemouth bass, weight 6½ pounds, length 21¼ inches, in Stillwater Lake, using a plug bait, on July 12, 1939. Micky Reiser, Police Officer, Wilkes-Barre, caught a smallmouth bass, weight 3½ pounds, length 18½ inches, in Nioma Lake, using a plug bait, on August 15, 1939.

Victor Searfoss, 30 Wyoming St., Hanover Township, caught a rainbow trout in Lackawaxen River, length 15¼ inches, weight 1½ pounds, on May 18th. Floyd Knell, 200 W. Northampton St., Wilkes-Barre, caught a brown trout in Bowmans Creek, length 21¼ inches, weight 3 pounds 2 ounces, on May 20th. William Labar of Dallas, caught a brown trout in Bowmans Creek, length 20 inches, weight 3¼ pounds, on April 15th.

Largest snapping turtle ever reported to the ANGLER was this 56 pounder caught in a Pike County lake by Joseph Etres, shown with his catch.

George Kristofek, Larksville, caught a rainbow trout, weight 3¼ pounds, length 19½ inches, in the Lehigh River, on June 29, 1939. Leonard Wilbur, Kingston, caught a brook trout, 2 pounds 13 ounces, length 18¾ inches, in the Lackawaxen River, on June 8, 1939. Steve Hudak, of Bear Creek, caught a brown trout, length 19½ inches, in Bear Creek on June 10, 1939. Arthur Kitchen of Mountain Springs, Luzerne County, caught a brook trout in South Brook, length 16½ inches, weight 2 pounds, on May 14th. South Brook is a tributary to Mehoopany Creek in Wyoming County.

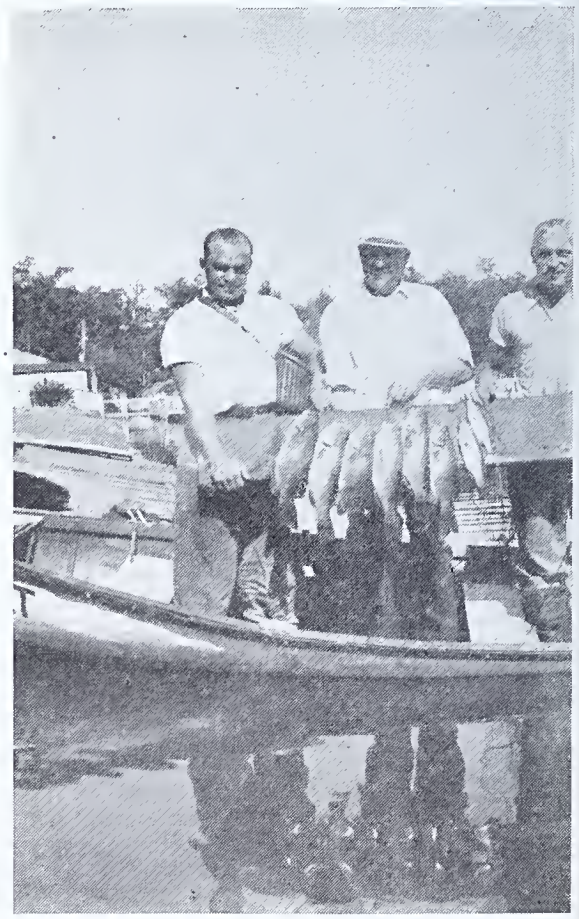
Fremont Tilley, 414 N. Washington St., Wilkes-Barre, caught a wall-eyed pike, weight 5½ pounds, length 26 inches, in Lake Carey, using a plug bait, on August 1, 1939. Leroy West, 42 Gillegan St., Wilkes-Barre, caught a wall-eyed pike, weight 5 pounds cleaned, length 27¼ inches, in the North Branch of the Susquehanna River, using a spinner, on July 15, 1939. Edward J. Branigan, 15 Cayuga St., Forty Fort, caught a wall-eyed pike, weight 6 pounds 15 ounces, length 28½ inches, in Lake Carey, using a spinner, on July 31, 1939.

David Jones, 126 Madison St., Wilkes-Barre, caught a brook trout in Lackawaxen River, length 14½ inches, on May 15th. Elmer Dula, 10 W. Jackson St., Wilkes-Barre, caught a rainbow trout in Bowmans Creek, length 14 inches, weight 1¼ pounds, on May 14th. Joe Daubert, 13 Strand St., Lee Park, caught a brown trout in Big Wallenpaupack Creek, length 21¾ inches, weight 2 pounds 15 ounces, on April 24th. Miss Eleanor Linder, Rear 51 N. Maple St., Wilkes-Barre, caught a brown trout in the Lehigh River, length 22 inches, weight 3 pounds 14 ounces, on April 16th.

John Whitelevich, 68 N. Penn Ave., Wilkes-Barre, caught a largemouth bass, weight 7½ pounds, length 23 inches, girth 16 inches, in Stillwater Lake, using a minnow, on September 1, 1939. Francis Litchman, 115 Gardner Ave., Parsons, caught a largemouth bass, weight 5¼ pounds, length 20½ inches, in Stillwater Lake, using a plug bait, on August 26, 1939. Howard Moore, RFD No. 4, Dallas, caught a largemouth bass, weight 6 pounds, length 21¼ inches, in Cummings Pond, using a plug bait, on August 14, 1939.

Leon Jones, 95 S. Gates St., Kingston, caught a smallmouth bass, weight 3 pounds 6 ounces, length 19¾ inches, in the North Branch of the Susquehanna River, using a helgramite, on August 5, 1939. Leo Armbuster of Forty Fort, caught a smallmouth bass, weight 3¾ pounds, length 19 inches, in the North Branch of the Susquehanna River, on July 30, 1939. Helgramite was used for bait. John Arndt, RFD No. 1, Hunlocks Creek, caught a largemouth bass, weight 5½ pounds, length 22¼ inches, on a fly, in North Lake on July 2, 1939.

Phil Scalonge, 71 Plank St., Pittston, caught a wall-eyed pike, weight 5 pounds and 14 ounces, length 28¼ inches, in Lake Wallenpaupack, using a white streamer fly, on July 2, 1939. Dr. William Brookus, 266 Lynwood Ave., Hanover Township, caught a wall-eyed pike, weight 7¼ pounds, length 29¾ inches, using a spinner, in Lake Carey, on August 11, 1939. Stanley Corbett, 848 S. Main St., Wilkes-Barre, caught a wall-eyed pike, weight 6¾ pounds, length 30 inches, in the North Branch of the Susquehanna River, using a helgramite, on August 17, 1939.



Smallmouth bass to be proud of. Mike and Joe Mensiek and Adam Balaeavage, Schuylkill County anglers, with their catch from Lake Wallenpaupack.

Courtesy—The Camera Shop, Williamsport

A picturesque spot in Lycoming County, the falls on Salt Run.

A NEW YEAR RESOLUTION

FOR FISHERMEN . . .

To Fish for Sport

AND

A Sportsman's Creel!

PENNSYLVANIA ANGLER

MUSKELLUNGE

FEBRUARY, 1940

TEN CENTS

OFFICIAL STATE PUBLICATION

PENNSYLVANIA ANGLER

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Vol. 9. No. 2 PENNSYLVANIA ANGLER FEBRUARY 1940

EDITORIAL

Junior Conservationists

OUR hats are off to the Junior Conservationists of Pennsylvania!

More than ever before, organized sportsmen and individuals have taken these lads under their wing, and we now have hundreds of Junior organizations in Pennsylvania.

We older sportsmen certainly owe a vote of thanks to these boys for their efforts in furthering the conservation program in Pennsylvania. Their activities in helping improve the streams of Pennsylvania in their campaign to control the water snake problem—the feeding program in connection with the work of the Game Commission—and many other activities—comprise the program of these future sportsmen.

It has been my good fortune to be intimately associated with some of these groups, and it has also been my privilege to recommend quite a number of groups for citation to the Boy Scout Court of Honor for the fine job they have done.

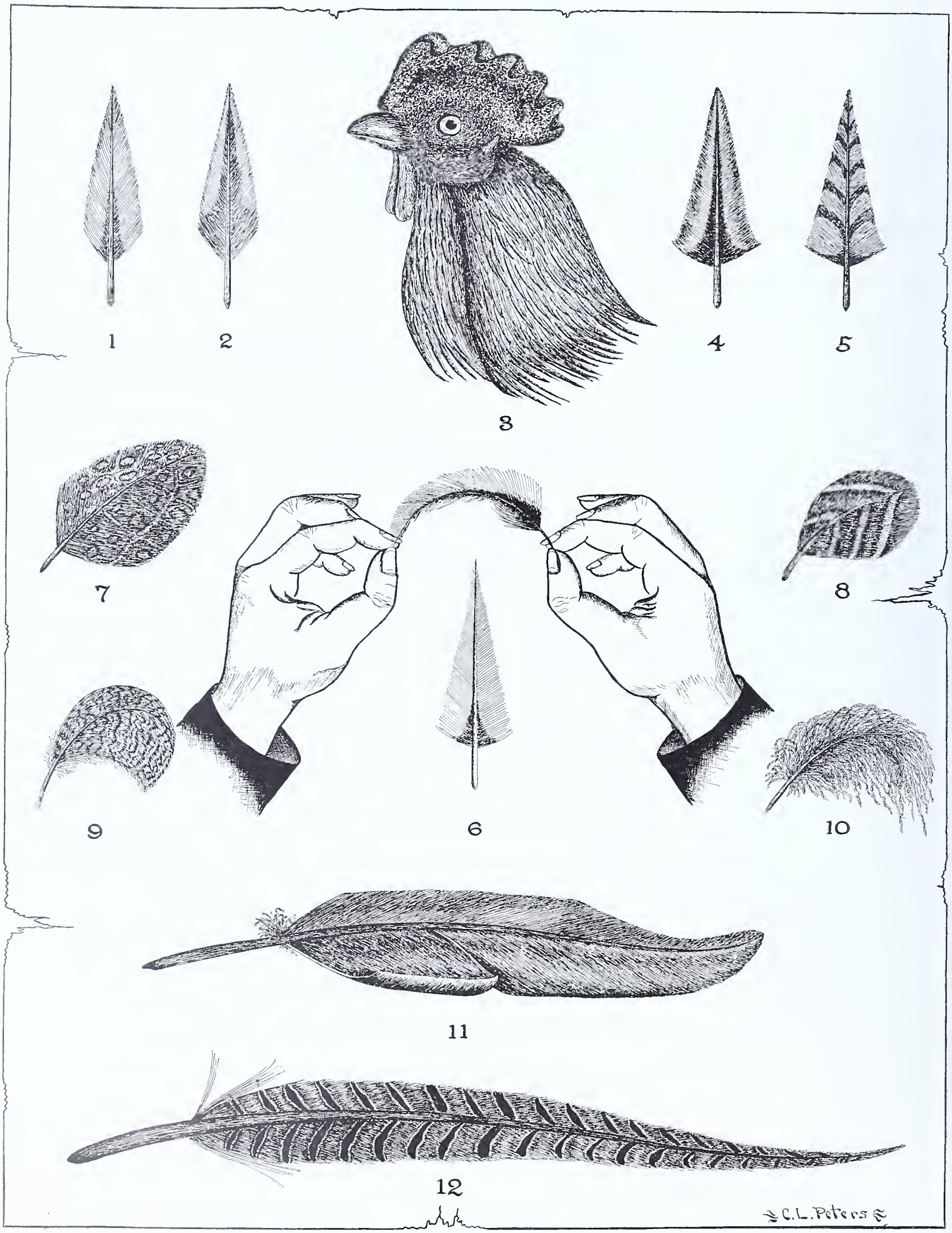
The Board, in cooperation with various sportsmen's groups, have attempted to prove to the boys that we appreciate the interest they have shown, and have set aside a large number of ponds or lakes to be fished exclusively by youngsters under 16 years of age. This movement spread all over the State and toward the end of the 1939 fishing season, it was a real problem to furnish enough fish to keep these projects going.

One of the things we particularly like about this program is the fact that it gives many thousands of under-privileged children who never saw a fishing pole, a chance to enjoy this most healthful recreation. A number of these projects have been located in the metropolitan areas of our State, and we known by personal contact, that the fishing afforded these youngsters filled a large gap in their lives.

In almost every instance where such a pond or lake was set up, local sportsmen's groups had supervision over the fishing, and a number of our sportsmen spent a great deal of time teaching the youngsters the art of fishing, and instilling in them the meaning of good sportsmanship.

We hope 1940 will bring a much closer cooperation between the junior groups and the adult sportsmen. These boys have shown their willingness to cooperate—now it is up to us to do our part.

C. A. French
Commissioner of Fisheries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C.L. Peters

FEATHER PROFITS FOR FARM BOYS

By CLAYTON L. PETERS

WITH the advance of the art of fly fishing there is more demand each succeeding year for good feathers from which these tiny creations are fashioned.

The farm boy who may be interested in poultry has an excellent opportunity to cash in on some extra profits by carefully cross breeding some of the selected stock of chickens which they may already have on the farm.

By cross breeding, some odd feathers are produced, and these bring premium prices among fly tyers.

In some instances good stock cocks of such breeds as the Rhode Island reds, New Hampshire reds, and Barred Rocks produce fine hackles that are in demand.

The poultryman who intends raising birds for hackles should start with the regular breeds as stated above with the addition of white and brown leghorns.

There are several factors that enter into producing good hackles. By experimentation, it has been proved that birds that are fed plenty of oats produce feathers in a shorter period of time and that they are of a glossy, stiff nature. These are two of the prime requisites of grade A hackles.

The amount of center fiber or web depends a whole lot on the age of the bird and in some instances on the breed. Usually a bird produces its best hackles at two years of age. Younger birds produce soft feathers that mat too easily and consequently are of little value. Older birds sometimes produce coarse feathers that are too bulky for fine precise work.

A bird should never be disturbed as long as the feathers are not fully matured, and this is usually not the case until mid-winter when their plumage is fully developed as added protection against the cold weather. However, a good bird can be plucked three or four times a year if oats and green clipped oats are fed.

The average person will soon recognize the distinguishing characteristics of good hackle as compared with those of poor quality. A good hackle will have very little center web and when arched the barbs will stand at right angles to the rib, and when released will spring back to normal position without retaining a strained curve.

Probably some of the best hackles for small flies can be procured from the small bantam game cocks. These birds respond well to the oats diet for hackle raising and the feathers, although few, are clear and glossy, springy and free from center web.

There is a breed of bantam for practically every type of larger bird, and these diminutive fellows are far less expensive to feed.

The farm boy can keep an assortment of bantams with little extra expense and can certainly cash in on the sale of these hackle feathers. Three bantam cocks, a brown, a ginger, and a white, should form a nucleus for a good brood. Straight color breeding can be tried at first and then by crossing them some odd but very good shades may be developed. The highly prized light blue color, so necessary for tying the blue quill gordon fly may be developed by crossing a pure white male bird with a black hen. The honey hackles so much in demand may be produced by crossing of ginger and white. And so, many other color phases may be produced. These are not infallible rules for color production but they will produce some birds of the desired color.

I own a pure badger bantam cock that was produced by crossing a ginger cock with a black hen. The other birds from the same setting were a motley lot of mixed plumage.

The boy on the farm need not confine himself to the collecting of chicken feathers.

Plumage from Guineas, ducks, and turkeys is also in demand and with the heavy stocking of ringneck pheasants in recent years the rural lad often has access to the plumage of these birds.

In the accompanying illustration I have pictured in Fig. 3 the head of a red bantam from my flock that produces three to four pluckings of hackles a year. This bird is now four years old and must be supplanted by another if I expect to have hackles of this quality at my disposal. Figures 1 and 2 illustrate the difference between a good quality hackle and one of a poor quality. It will be readily seen that the darker portion in Fig. 2, illustrating the center web, runs from the base to the tip of the hackle, making it soft and spongy. This hackle will soak up a lot of water and be very difficult to float. In looking for good grade hackles compare them with that illustrated in Fig. 1.

Fig. 4 illustrates the badger hackle used for making small black flies. This hackle has a black center, edged with gray and tipped with a margin of black. Similar to the badger is the furnace and cochy-bondhu hackles. These feathers are very rare in good quality and naturally demand extremely high prices. Instead of a gray band, as in the badger hackle these feathers are edged with red-brown. They are used mostly in the construction of spider and variant type flies.

Fig. 5 illustrates the much used grizzly or barred rock hackle. Sometimes these hackles can be obtained with a bit of red showing between the dark bars. These ruddy tinted hackles seem to appear more realistic as representing insect legs than the plain gray type and therefore are preferable.

I have seen cheap flies, tied commercially, of such patterns as the blue quill gordon, using barred rock hackle. A far superior feather for this type of fly is produced by cross breeding a white bantam cock with black hens. Sometimes a second or even a third breeding is necessary to produce the exact colors, but these feathers are almost indispensable for certain flies.

Fig. 6 shows a hackle of practically perfect structure. The outstanding features of such a feather are the thin flexible rib, finely tapered barbs, and the absence of center web. When the feather is arched the barbs stand out to form the center rib or quill as individual sturdy members of the feather and when the tip is released they immediately spring back to their normal position. The triangular shape of this feather is an asset in tying hackle and bi-visible flies where a tapered body is desired, but some good hackles have more of a rectangular shape and are equally good for the winged patterns.

Fig. 7 shows the Guinea feather from which the famous polka dot bass flies and the Guinea streamers for pickerel are made.

Fig. 8. The body feathers from the ringneck pheasant are sometimes used for fan winged flies and very often used on fancy salmon lures.

Fig. 9. The barred side feathers from mallard ducks are always in demand for making imitation minnows, fan wing flies of the drake family and bass and salmon lures.

Fig. 10 is a fine silky plume feather found at the base of a turkey's tail. These feathers are sold commercially, shrouded in darkness as to their origin, and fancy prices are demanded for the commercial names such as Marabou, etc. It is true that good grades of this type of feather are taken from hawks but those plucked from turkeys are of good quality. These feathers produce top notch streamer flies and the wide awake farm boy can enhance his spending budget by plucking them before the birds are sold for holiday dinners.

Fig. 11 illustrates the wing quill or flight feather of a duck. This is possibly one of the most used feathers for fly wing construction and when ducks are dressed for market the first joint of the wing should be clipped off and sold in pairs.

Fig. 12. A tail feather from a ringneck pheasant, the fibres of which are used for the long tails of flies of the drake family.

NOTE: The writer will be glad to inform readers where feathers of the kind mentioned can be marketed. For further details write to C. L. Peters, Lykens, Pa.

HEAVY STOCKING BY U. S. BUREAU

Nearly 720,000 fish were placed in Pennsylvania streams for the benefit of the state's anglers during the past year, it was announced by the U. S. Bureau of Fisheries.

According to the National Wildlife Federation, the Bureau of Fisheries has completed one of the largest game and pan fish operations in the history of its stocking in Pennsylvania.

Greatest number of fish stocked were 241,525 rainbow trout. There were 50,515 largemouth bass, 195,815 brook trout, 7,750 catfish, 136,440 Loch Leven trout, and 85,050 sunfish placed in Pennsylvania streams also, making a total of 716,095 fish stocked.

National Wildlife Federation, which is again sponsoring Wildlife Restoration Week to be observed throughout the nation from March 17 to 23, 1940, is coordinating the efforts of 36,000 outdoor organizations interested in protecting and fostering America's all-important natural resources.

A RUBBER CRICKET QUILLBUG

By WILLIAM R. WALTON

IN the realm of animal psychology, rheotropism is defined as "the reaction of organisms, such as fishes, etc., to currents of water."

When some scientists do not fully understand certain phenomena in nature, they are prone to take refuge under shockingly cacophanous, polysyllabic jaw-breakers—hence the "tropisms." According to these disciples of mechanistic principles, such animal responses to fundamental urge as taste and smell are "chemotropism", response to light is called phototropism, and so on through an endless series of Hellenic, verbal monstrosities. Coming now to really important applications of these terms, when a trout succumbs to the tickling or guddling technique of the poacher, the unfortunate fish is said to be a victim of his own "thigmotropism" or sense of touch.

A fish dashes upstream not because it has seen you, or to spawn, or to seek the cooler waters at its head, but because, forsooth, it has become "negatively rheotopic". *Horsefeathers!*

When at meal time, my little terrier trots out to the kitchen, brings her feeding saucer, and laying it gently on my knee, pokes me with her paw, what kind of polysyllabic tropism does that represent? God knoweth, but one might call the action by a short ordinary term and be quite accurate.

Now the immediate occasion for this spasm of *Cacoethes scribendi* is a recent experience of the writer with an artificial cricket such as is about to be described and illustrated.

I was sneaking through the woods beside a fine clear pond that is known to be infested with numerous large specimens of *Micropterus salmoides* or largemouth bass when, through a small opening in the brush I spied a 16 inch specimen of said voracious fish loafing close to a steep shelving shore.

He could not see me for the trees and brush, so I dropped my specious cricket, attached to a light greased leader right over his head without scaring him in the least. He turned slowly around facing the shore and came to a position with his nose within 6 inches of the lure. I twitched it and he merely followed it, exhibiting obvious suspicion. He was so close that I could see his eyes roll as he viewed it first from one side and then from the other. Apparently, it looked good to him except that it had a thin floating white thing attached to its head, that did not belong there. He was responding to "gryllotropism" but his "anthropophobia" was also functioning actively. S-o-o-o, he kept slowly following as I twitched the cricket shoreward in short stages until it was but three feet from the bank. By this time my line had become shortened to less than 6 feet and presently the leader lifted completely off the surface as I moved the insect for the last time when, WHAM! he came out like a rocket and hit it, spattering spray in all directions. Tropisms your grandmother; the fish was hungry, he recognized the lure as an insect but seeing the leader on the surface, he was leery. When the leader disappeared and his tidbit was about to escape, he smacked it. In other words, he just *used his old bean.*

It must be acknowledged that when bass are indulging in one of their occasional feeding sprees, they may be caught on artificials that bear wholly irrelevant names and which resemble nothing mundane. In fact they remind one of certain specimens of so-called sur-realist art which look like a magnified cross section of a piece of mince pie but are labelled with such names as "portrait of a lady combing her hair"!

Unfortunately these spasms of piscatory insane gustation are of all too rare occurrance, in point of fact and to paraphrase Hamlet, "They are but mad north northwest, when the wind is southerly they know a minnow from a casting plug". For this reason I believe it becomes profitable usually to angle for game fishes with some kind of lure that resembles, as closely as may be, a choice morsel of fish fodder.

Now, if a grasshopper represents the apple pie of a game fish, then a juicy, fat, field-cricket is the ice cream which crowns his dessert. But, unfortunately, crickets are obtainable only through the exhibition of much oomph in the hind legs of a fisherman. Moreover the body of a field cricket is so squashy, so to speak, and its removal from the hook is a matter of such exasperating ease on the part of ye crafty fish, that angling with ye cricket becomes a source of grave spiritual peril to ye hot tempered angler. Hence, to protect one from these excruciating trials, especially the extravagant expenditure of oomph, is surely a most pius thought —hence the concoction of a rubber cricket, tough enough to defy the addresses of several old bronze backs, seemed the answer to an angler's prayer.

Yeah, I have heard that one about "lazy people being responsible the really useful inventions"—and I believe it too.

Those enormous, city, "5 and 10" stores, which might be characterized as:

Marbles, lipsticks, lollipops,
Phony jewels, glue and mops;
Ribbons, ice cream, tink'ling bells,
Strident voices, frowzy smells;

are, never the less, a very fertile source of novel materials for the zealous lure butcher and fly tyer.

In such an *emporium odoratum*, I discovered recently, a kit consisting of a tin can containing a black rubber paste accompanied by a tube of rubber cement, the same being intended for the prosaic purpose of mending boots. This paste proved valuable for a variety of piscatory purposes as it remains plastic for about 10 minutes when exposed to the air, but then hardens into something that resembles live rubber. For instance, excellent nymph bodies may be molded of it after one becomes aware of the degree of shrinkage that occurs in it upon hardening. It is however, considerably heavier than water and requires to be supported by a buoyant material when used on floating bugs.

This is accomplished by applying a thin layer of this rubber over a quill body such as that described in the September, 1939, issue of the Pennsylvania Angler, page 4, figures 1-3.

After some experimentation I found that a very natural appearing floating field cricket could be constructed in this manner.

The foundation or skeleton of this cricket is constructed as illustrated in the former article and is also shown in figure one herewith.

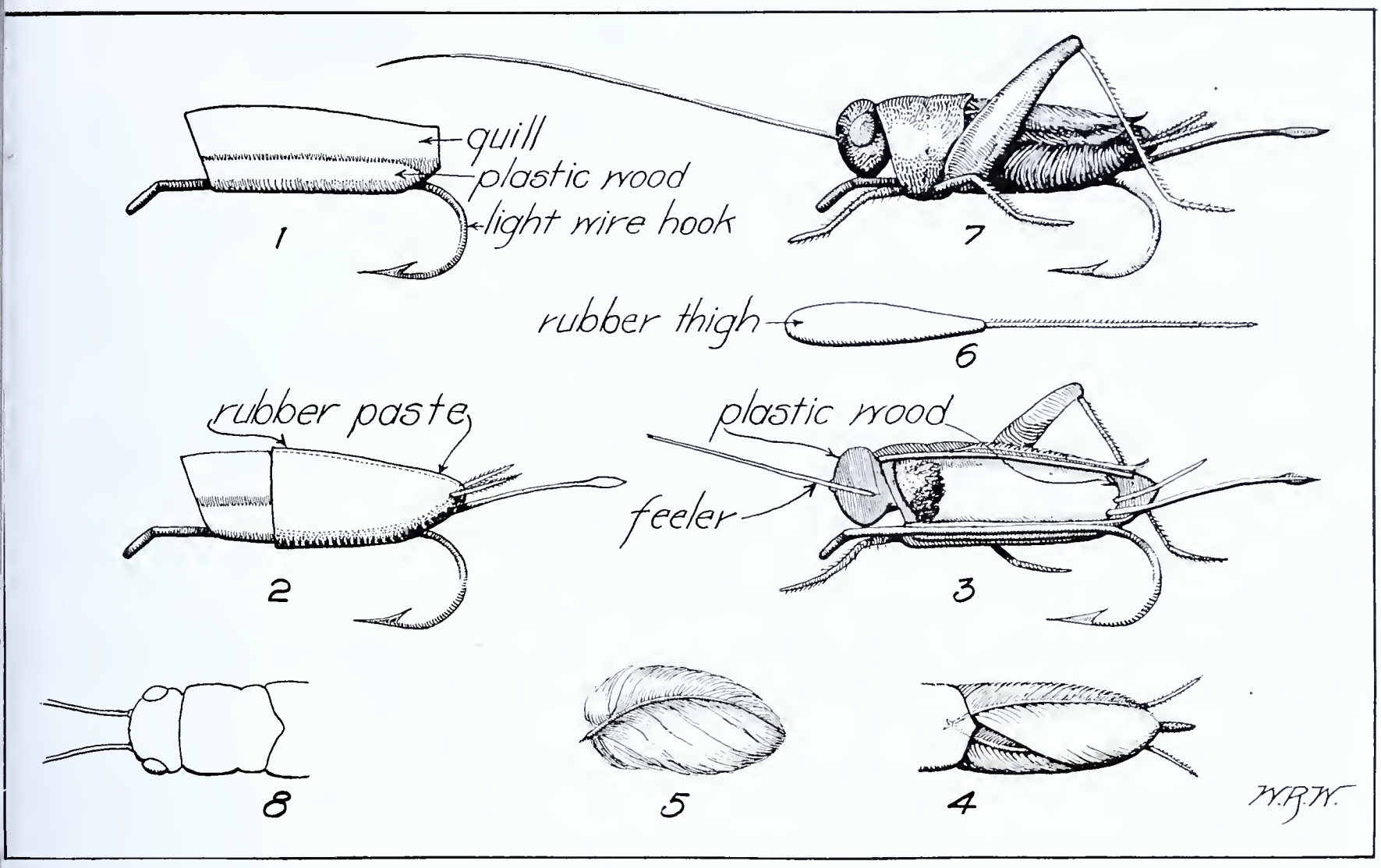
The body consists of a section of the butt end of a large goose quill ⅞ of an inch long and ¼ inch in diameter.

Both ends of this are sealed with plugs of plastic wood as described in the article previously referred to, but the cricket requires a quill of the largest diameter in order to provide sufficient buoyancy for its rubber covering which is considerably heavier than water. While sealing the tail the 3 appendages, in figures 2, 4, and 7 are inserted. In preparing these the longer one which is used by the real insect in laying its eggs, may be made as follows: Take a slender elastic black rooster hackle and trim off its barbs from both sides. Select from the tip of this a section one inch long. See that this is very elastic as otherwise it will interfere with the hooking of such small mouthed fish as blue gills and other sunfish. Before inserting the appendage, make the swelling near its tip, figure 2, by rolling on to it a small pill of plastic wood as shown in figure 7-B of the former article on Quillbugs. When this hardens it may be whittled to the desired slenderness with a sharp blade. The remaining two tail bristles,, figures 2 and 4, are made also of hackle shaft but on these a little of the bases of the barbs is left to represent their natural hairy covering.

These bristles should be ¼ inch long when finished. The style of tail illustrated is worn only by the female insect as the male carries only 3 simple bristle-like appendages such as shown in figure 4 and which may be substituted for the more elaborate tail of the female in the artificial insect if so desired.

The tail appendages may all be inserted at the same time, and while the plastic wood plug is being tamped in as shown in figure 3 of the former article on Quillbugs. If these are simply held in their relative positions with the left hand while the plastic is pushed in around them, they will become firmly fixed when this sets. The internal construction of the tail as well as of the front plug, is shown plainly in figure 3 of the accompanying illustrations.

After the tail appendages have been inserted it is then time to begin covering the quill body with the black rubber paste. However, first apply to the quill a thin coat of regular rubber cement and let it set well. Now dig out a small portion of the rubber paste which comes in a can and roll it flat with a round lead pencil, on a smooth surface like a small glass plate. Cut from this thin sheet with a sharp blade, a piece of about the right size and shape to cover completely the belly of the cricket as shown in figure 2. Wrap the rubber around the quill and press firmly into place. It should adhere firmly to this and if then there still remain



some small spots uncovered by the rubber, fill these in with small bits taken from the can. Care should be taken to make this rubber covering as thin as possible as otherwise it may make the body too heavy and it will fail to float.

The wings of the cricket may now be applied. These are made of small dark colored feathers, as shown in figure 5, which was taken from the shoulder of a crow. However, any small dark feather may be used but in order that they may lie snugly when crossed over the back of the cricket they should match and be taken from opposite sides of the bird.

In size the wings should extend from a point slightly forward of the center of the cricket to the tip of its tail, as shown in figure 4.

To attach them, first place on the body at the point of attachment and along its entire top a smear of rubber cement. Then do the same to the inside or convex side of the feather and press it firmly into place. The left wing should be applied first as the right one must overlie it when finished as shown in figure 4.

The remainder of the body may now be covered with a band of rubber which should slightly overlie the bases of the wings. (figure 4). Be sure to apply a coating of rubber cement before putting on this part of the covering. Bring it to the front edge of the quill but do *not* cover the plastic wood plug at its front end, as the head is constructed of plastic which will not stick to the rubber firmly. The reason for using plastic here will be explained later.

The hind or hopping legs may now be constructed and as a foundation for these cut two pieces from the tip ends of two black rooster hackles, each about 2 inches long. Trim off the barbs with a pair of small sharp scissors but leave a little of it on the tips for about one inch as shown in figure 6. Dig out a small pill of the rubber paste and roll it on to the base of the shaft as shown in figure 6.

When finished it should be carrot-shaped and about ⅝ of an inch from the large end to the small tip. Do the same with the opposite leg and when the rubber has slightly hardened, which will be in a few minutes, flatten each of them slightly by pressing the bases between the finger and thumb. They may then be attached to the body and the point of attachment is plainly indicated in figure 7.

Place at this point a smear of rubber cement running it diagonally up the side, where the leg is to rest, as shown in the illustrations. Place a drop of rubber cement on the inside of the leg and wait until it has congealed, then press the leg into place at about an angle of 45 degrees with the vertical as shown in the figures. Do the same with the opposite leg and allow to harden for about one hour. The knees may then be bent down and fastened with a wire loop as shown in figure 9-B of the Quillbug article above referred to. A drop of water-proof (not rubber) cement is then placed on the knee and the same allowed to harden thoroughly and when this has occurred the feet may be bent and fixed in a similar manner but the use of the wire loop may be dispensed with here. I have found that legs constructed in this way will stand a lot of punishment without apparent injury as they are quite tough especially after the hackle has been in the water for a few minutes.

In order to construct and place the front legs all that is necessary is to cut two pieces of trimmed hackle each about one inch long. Cross these over the chest of the cricket, applying at their junction a drop of rubber cement and allow it to harden.

Then press over this junction a small pill, of fresh rubber paste and when this has hardened the legs may be bent as desired. (figure 7).

The last step is the construction of the head and the placing of the feelers or antennae. The head may now be constructed and fastened to the body. It is constructed of plastic wood instead of rubber for two reasons. This material is lighter than the rubber and it holds the feelers much more securely than the rubber paste even when this has set hard. This latter is a rather important consideration as the fine teeth of a bass are very likely to extract these slender appendages when a short strike occurs. To make the head, take a piece of the plastic wood, in the well moistened fingers, and roll it into an egg-shaped pill of the right size. Place a dab of celluloid or waterproof cement on the surface of the plastic wood plug in the neck of the body and press the pill gently against it. Flatten it slightly as shown by the top view in figure 8. Without waiting for the head to harden, the feelers or antennae should be thrust into the front of the face in the positions shown in figures 7 and 8. First dip the ends of two stiff bristles in the celluloid cement and then gently thrust

(Continued on Page 22)

NOW YOU TELL ONE

By E. LLOYD KING

Sketches by Earl S. Johnston

PROBABLY all of us on the streams at times witness little scenes or play prominent parts in trivial real life dramas that may seem downright serious or even tragic at the moment, but afterward viewed in the light of reminiscence and the chuckles of ironical companions assume merely the proportions of amusing and nice to remember interludes.

Some of these little jokes even on ourselves are really too good to be bottled up in the minds of only a few pals of the waterways. Sharing confidences, hopes, experiences, joys and disappointments all make for the common good. Fishermen are already just about the most companionable of sportsmen, good fellows practically all. Wouldn't it be an excellent idea for the fellows to share these little adventures through the pages of the ANGLER—if and as space permits? This fisherman is willing, but must apologize for the comparative insignificance of the yarns he has to spin. A lot of other fellows surely have tales really worthwhile.

Blind Trout

Now my first trout on a "dry" was blind in one eye! And I still hear about it. Among the innermost circle of the family fireside and those ever jibing boon companions, I am even known as the guy who catches blind trout. Most every time I try to sneak into the kitchen door with grass peeping from the creel, there's a derisive shout "More blind trout". When I land at the office next morning, some wit yells "Did they have eyes this time?" All of which just about makes it unanimous. Maybe it was a joke; maybe not. Considering the circumstances, the writer at the risk of being dubbed a confirmed egotist is still not ashamed to put the tale on paper.

It was early in the fledgling days as a trout angler and this fisherman had never tried to float a fly, actually not having a bona-fide dry in the kit. Working a small limestone stream near Carlisle in the evening with only streamers and snelled wet flies, I ran into a furious rise. After taking a nice brown or two on streamers, half a dozen other fellows nearby began to snap them up with dries. What to do; what to do.

Now I've never liked to borrow tackle. It simply is not done in polite circles on the waterways. Still a fishing companion insisted the writer accept the loan of a dry. Reluctantly selecting a bedraggled, much worn Royal Coachman, it was tied on the level leader and some line dressing fumbled into the hackle, then snapped out over the water. On the back cast, a wire fence intervened and again there was no fly.

Dubiously diving into the personal supply of snelled wet flies, out came a big, heavily hackled No. 12 blue dun. Clipping off the snell and bending the wings somewhat open in the semi-spentwinged pattern, more line dressing was fumbled about with excited hurrying digits.

Anxiously this impossible assembly was shot out over the water. Wonder of wonders, that converted wet fly landed upright and began to drift down, level leader and all, toward an eddy. Plop, a nice brownie had it, full ten inches. It's hard to say who was more surprised, the brownie or your correspondent, when I set the hook and saw him break water. And he was blind in one eye, and each mother's son nearby thought it a good joke and had some ribbing comment to make as the word passed along "That guy down there just caught a one-eyed trout".

The fly was a mess and it just simply would not work again. Anyway another No. 12 blue dun came out of the box, was desnelled, greased and we tried again. The darn thing looked almost as big as a butterfly as it floated down, but beginner's luck—another 10-incher rose calmly out of the depths, ogled it carefully and blamed if he didn't snap it down. And he wasn't blind.

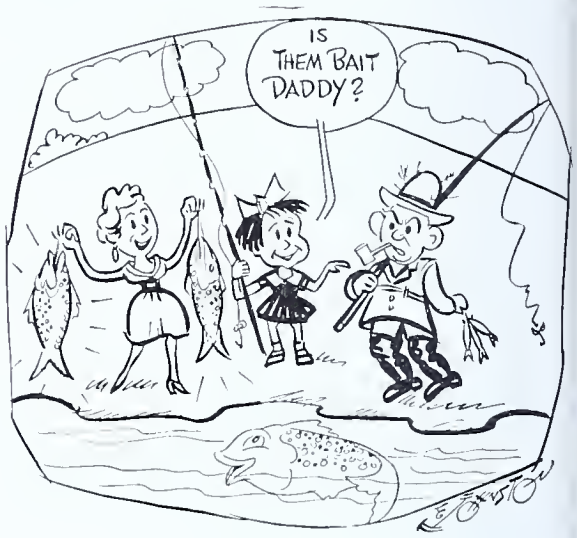
Your narrator had never before taken two fish that pleased quite so exceedingly and doesn't believe he ever shall as life unfolds. There have been a lot bigger ones since it is true, but each of these seem to fade into the general scheme of things, just a sort of hazy indefinite recollection as time slips along. Those first two are indelibly stamped as one of the more precious big moments in a life that has been too closely devoted to the grindstone; too little to play.

There on that balmy spring evening, possessed only of wet snelled flies, and a level leader, a dry fly purist was born. And a brownie, blind in one eye, started that guy on the way to moments of calm, restful, carefree contentment such as he had never experienced in any other type of fishing nor any other form of recreation.

That Feminine Touch

Now the Better Half is some shakes as a dry fly sharp-shooter on trout; not to mention the little ten year old daughter. By hook or crook, double teaming, majority pressure and hitting below the belt, the two of them manage to ankle into quite a few trips in quest of the spreckled warriors, offtimes back into the hinterlands where women really ought not to be.

With such determined feminine competition, the old man is hard put at times to



maintain the vaunted masculine supremacy in the piscatorial wars, or to be painfully exact let's simply say to keep his face from getting red.

Comes in mind the 1938 season, the first year for the wife with dries. Mid-season drifted along and this fisherman was happily angling away one sultry morn some half mile upstream; the two feminine dependants, ever acting in unison, downstream.

About mid-day, feeling rather elated with four or five rather fine brownies in the creel, a corresponding number of smaller fish having been released, the masculine one-third of the household, proud as a primitive jungle lord coming home with the kill, sought out the feminine two-thirds. As your correspondent meandered down, the femmes were coming up. Those wide ear to ear grins weren't reassuring; there was something in the wind. The weight of the creel began to grow lighter and lighter at the sight of copious grass sticking out at all angles from the Better Half's basket; each reluctant step saw those trout shrink further and further in estimation; at speaking distance they had evaporated almost to tiny infinitesimalness.

Yep, she had it; a bigger one than hubby had ever caught! And to add insult to inury a week or two later another just as big fell victim to a well-placed bit of feathery fluff. Not until late afternoon July 4th did this fisherman catch up—and then only equalling the first one, beating it with nary an ounce nor a fraction of an inch.

Last season, same old story. First trip out, second day of season, first fish for wifey; the old man scratched and scrambled around four or five weeks longer before he could equal that fat old brownie. And e'en to this day the argument waxes warm as regards the relative girth—we foolishly neglected to measure the first one's waist line. Usually out-scored 5 to 1 or more in number, those femmes sure put up a terrific argument when the feud boils down to size.

Breadcrumb Trout

And then there's that lesson in trout fishing handed to your correspondent and two pals on a memorable day in the misty past

the mere suggestion of which even at this late date brings outright guffaws and barbed comment from derisive friends and skeptical intimates in on the know.

We were all confirmed, if inexperienced fly enthusiasts; we were all charged to the brim with newly acquired flyrod-purist scorn of the bait fisherman's intestinal angling: Al, Frank and the writer as we sallied forth with the dawn one May morn, outfitted and armed with a conglomeration of assorted ideas as to what we considered balanced equipment; further backed up and abetted with feathered monstrosities by the score.

But the trout weren't home—or at least not hitting; well, anyway, not at those bits of feather and hair as offered by our hopeful tho somewhat amateur trio. Finally three tired and stream weary flyrod purists sat down to a council of war. Nearby was a farm house, and in it lived a gentleman of the old school, yea a gentleman who had counselled despairing fishermen before, a gentleman appreciative and kindly at heart, a gentleman who could descend to and sympathize in full with those abysmal depths of excruciating agony reserved only for frustrated, wild-eyed, newly-born flyrod purists.

"What's that, suh! What's that did you-all say? Don't mention it to us, suh, don't mention it to us. I reckon you-all don't notice we-all are fly fishermen? Not using the right bait; that's sacrilege, suh, bless my word and pon my heart, plumb sacrilegious!" Now since this paragraph is getting sort of southern, well south by west anyway, I might as well continue the atmosphere by saying we-all expressed ourselves as "being from Missouri" and exceedingly willing to be shown. Our new found friend promptly obliged with a demonstration, painful but thorough, and he sure knew his stuff or perhaps I should say his fish.

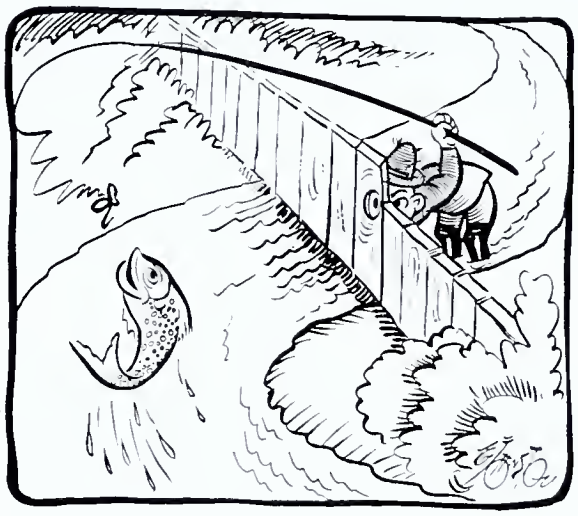
A slice of bread was procured and broken into small chunks, then thrown upon the water. A placid narrowed pool that a moment previous had shown no sign of life instantly began to boil with smashing trout. In a thrice the bread was churned to bits and disappeared down gaping finny jaws.

Now your correspondent being of a skeptic turn of mind, no doubt acquired by the masterful feat of overpowering an eight incher earlier in the day, scornfully sat down on a nearby hen coop to ponder the vagaries of trout, the vicissitudes of trout fishing, the futility of life and the idiosyncrasies of mere men. Not so, Al and Frank, born optimists if there ever were. Those two enterprising gentlemen hurriedly borrowed some bread and returned to the trouting wars. Hooks were carefully baited; two wary anglers crept upon the unsuspecting prey, barbed slivers of steel camouflaged with breadcrumbs in one nervous hand, the other agitated fist tightly grasping decoy hunks of the staff of life.

Two backsliding, tho eager, flyrod purists cast their bread upon the waters, one chunk somewhere among the innocent decoys concealing a deadly hook. Instantly trout smashed and churned the water amid the two offerings of bread. In a moment all of the bread had disappeared, that is, all but the two hunks that concealed the deadly barbs. Al and Frank tried again, and yet a third time, but the trout didn't like bread with a steel core.

Now it would be nice to end the tale with the old story book standby that the beautiful innocent trout lived happily ever afterward. But such was not to be—three amateurs progressed in skill and stream technique as the season wore on—and three or four weeks later, well you know how it is with the guy who laughs last. But I still think the last paragraph had best been omitted; it was a lousy trick to disillusion such innocence.

Through a Knothole



And this one happened only last season—when I should have known better.

A particularly nice brown had been marked down in an old abandoned watercress bed, still surrounded in part by a low, rotting wooden board fence. A channel of fast flowing water, three to four feet deep, cut through the tangle of watercress and weeds. Right where the brownie was wont to lay, the channel swerved over against the rotting wall; directly opposite the flow from another channel washed the other side of the partition, very important in later developments.

This cagy old brown had been stalked half a dozen times; sundry comments of those in on the know were becoming biting. True it was a nasty spot; weeds high, soft bottomless footing, impossible to get off the bank and into the stream, also an old dead tree there to add hazards to a righthand caster. Several times the old boy had leisurely inspected a dry fly and turned away; several times frightened smaller fish had darted upstream and scared him back under the cress; several times an ugly breeze had fouled the line and leader in the dead tree.

Something original was necessary—that fish would not be fooled off the high bank and protected by his natural safeguards. Perhaps a southpaw might have turned the trick by crawling close on hands and knees, and working a side-arm cast around the old dead tree; a righthander needed subterfuge. Why not creep up the outside channel, gravel bottom and solid footing, that washed the outer side of the wooden partition, and then cautiously float the fly downstream? Not orthodox maybe, but worth a trial anyway.

Early one June afternoon the latter plan was put into effect. Crouching low so as to hide behind the wooden partition and edging carefully forward inch by inch, your narrator came to the place where the two channels washed the boards, one on either side. Still crouching I peeped through a crack in the wall. Knock me for a feather if the old boy was not laying there under a bit of watercress, in feeding position, head upstream and not over four or five feet away. No chance to float loose line downstream there. With only the leader dangling, the rod was simply pushed up and over the partition, the breeze dancing the fly out over and above the brownie.

Believe it or not, he jumped at it. And there we were; your correspondent on one side of the fence, and a mad churning brownie on the other. And to make matters worse, I had come away from the car with only one very light dry fly leader, and it certainly was being sawed and twisted about through the cress, not to mention what was threatening the pet rod. If I wanted to save the leader and rod—and land the fish—there was little time to spare. Over the partition we crawled and slid up to the armpits in mud, watercress and ice water. There was not space to play a fish; he darted from one bunch of cress to another and back again. Mud, cress, fish and fisherman were a hopeless tangle. I sincerely believe he slapped me in the mouth one time with his tail; something did, but perhaps it was only a particularly luscious splash of juicy mud. Somehow or other, he darted into the net on one of the mad lunges, and the battle was over. Painfully we clambered to dry land with our prize, the latter still twisting and kicking defiantly. And he was a beauty; strikingly marked and well-conditioned. Only his eyes still haunt me; somehow or other they seemed hurt, defiant, reproachful. And even to this day, chicken-hearted softy conscience whispers I handed a dirty deal to a pal. He deserved a better fate. But the old rascal was a cannibal and the evidence wasn't circumstantial.

WEST DECATUR CLUB IMPROVED STREAM

At the January meeting of the West Decatur Fish and Game Association, officers were elected for 1940. Charles Dimeling was elected president, Wesley Michaels, vice president, A. R. Ruden treasurer, and A. G. Shimmel, secretary.

It was announced that during 1939, the club had built 200 game feeding stations, improved a mile of trout stream, stocked four dozen rabbits, one dozen ringneck pheasants and 4700 trout. The average membership of this club for the last five years has been 125 a year.

FISH FODDER

Last Year's Drought Prompts the Question: How's That Forage For Trout and Bass?

By ALEX P. SWEIGART

The drought's effect is vividly illustrated by this photo of a major trout stream.

WHILE the recent cold wave has caused most of us to resort to shin toasting and the kindred subjects of swapping fish yarns, comparing fly dressings and the bass-taking qualities of certain plugs, there seems to be no time more appropriate than the present to discuss a subject close to the very core of our old sport of fishing: the effects of the past year's drought on some of our pet waters. Starting at scratch, for frankly the surface in the study of wild environmental conditions under which fish life must exist has hardly been "scratched", we must still recognize the importance of two vital factors in the game fish picture, *food and cover*. Other factors being favorable, an abundance of food, and cover to furnish protection, combine to form the very groundwork upon which an increased supply of our coveted bass and trout may be produced in wild waters.

In our great fraternity of anglers, there were many last bass season who didn't use a minnow, stone catfish, crayfish or helgramite, relying entirely upon the sport they derived from the casting rod or fly rod with artificial lures. Some of them, believe it or not, carried a small sampling net on their fishing jaunts. To use old Jerry's expression "they wuz jest plum curious ter know what wuz under the rocks" and any live forage taken was carefully returned. In some instances, during the peak of the drought, gratifying finds of forage were made, in others, the opposite was true. Only minute sections were disturbed on all riffles checked. The heavy growth of aquatic vegetation apparently attributable in some part to the low clear water and higher water temperatures prevailing is believed by this group to have been a distinctly favorable factor to increased forage production in some of our bass waters.

Briefly, effects of the drought varied in different sections. Big Pine Creek, in Clinton, Tioga and Potter counties, along with its tributaries, for example, was reduced to a pathetic flow, great areas of riffles and shallows being exposed to air and sun. In certain instances, cold water feeders on this freestone watershed dried up entirely while others dwindled to a series of stagnant or near stagnant pools. In extreme cases such as this, the loss of organisms and forage fishes upon which game fish rely is believed to have been appalling. Few, if any streams, were unaffected by the drought and its effects upon trout and bass waters may be more truly gauged during the coming summer. Another factor that may have strong bearing on the fish life and forage upon which it exists is the recent freezeup of many of our waters while they were still at exceptionally low stages. To the angler-conservationist, the 1940 fishing season should offer a fertile field for forage checkup work.

It's a fascinating game, this "fishing-combined-with-forage-checking". We all know that during those days astream in midsummer there's often a lull in the striking activities of trout or bass when the sun gets high. Then it is that a little work with the small sampling net may reveal many things of interest, things that may have very real bearing on the racy, thin appearance of bass we have been taking or the poor condition of trout in some stream. We must work with the thought uppermost in mind that this is a field in which there is a great deal to learn, in which a bare start, if it may be called that, has been made. Above all, the maxim must be a minimum of disturbance on the bed of any riffle, only enough to secure a fairly accurate picture of the average conditions prevailing. A pioneer in this work and a fisherman whose splendid articles on aquatic insects have been a source of pride with the ANGLER for many moons is Charles M. Wetzel. For many years the writer has enjoyed his companionship during days astream, and many times, happening upon him unexpectedly, we have found him searching for nymphs on a riffle. Mighty valuable data concerning bass forage and its relationship to bass condition has been gathered by Charlie Fox, an ace light lure fisherman who has won many converts to the cause

One of the most ardent artificial users in the state is Don Martin, shown here in action last season on Pine Creek.

Conodoguinet smallmouths, each one a three-pounder. A light casting lure produced this catch for Charlie Fox.

of artificial fishing in Pennsylvania during the past five years. Bob McCafferty, Harris Breth, Don Martin, Nev Sherlock, Lew Kunkel, Clayton Peters, W. R. Walton, Dave Groy — we could run on into a long list of fishermen who have combined with their sport that more vital issue of finding out all they can relative to environmental conditions governing it.

As a sideline to actual fishing, it has been found that frequently this curiosity concerning game fish forage may yield surprising dividends. We recall an incident that occurred several years ago on the Tuscarora. Don Martin and the writer had systematically plugged a deep flat in which we had marked down on a previous occasion a fine smallmouth bass. Our efforts to no avail, Don moved upstream while an eddy above the flat in which a school of silver shiners had gathered occupied our attention. Perhaps fifteen minutes of observation of these graceful forage fishes, poised in the current and eagerly seizing hapless nymphs and other organisms swept to them, had elapsed when nothing more than a whim for a final cast in the flat's upper section caused us to give it a try. Developments came with all the drama that a bait caster can hope for during his day astream. The half ounce wobbler barely splatted to the surface when a savage strike with its accompanying swirl almost tore the light casting rod from our grip. Three pounds of perfectly conditioned smallmouth gave then an aerial exhibition that will live in memory and literally fought to the last gasp before the landing net was slipped under it. We duly nicknamed that fish the "shiner school bass".

Back to the more serious angles in this vital problem of the food supply and its relationship to game fish which rely upon it, questions aplenty crop up. Concerning bass, for example: What types of forage are most readily accessible to them in our Pennsylvania waters during the active feeding season, roughly from April until October? When the adult spawners are ready to stiffen into dormancy, how much surplus fat and flesh is essential to carry them safely through the dormant period and insure that the female fish will emerge from that state in good condition for spawning without having drawn for sustenance from the vital egg supply? After the brood of young have left the protection of their guardian, what are ideal conditions for their growth in any water? (Not only types of forage but cover enter into this problem.) Facing hard facts, there's more to learn about bass in a wild state than could be crowded into an average lifetime

The same goes for trout in a wild environment. What constitutes ideal trout forage? Are an abundance of minnows, such as the blacknosed dace, to be reckoned on the credit side in trout water? How may insect hatches, conceded ideal trout forage, be increased in certain waters?. Would fingerling trout stocking, if carefully planned to include strong-flowing spring feeders to major streams, waters to which wild trout would normally resort for spawning purposes, prove effective?

Planned Fingerling Stocking

Will carefully planned stocking of fingerling trout in waters of the type just mentioned prove worthwhile? The possibilities attached to such a program appeared so enticing that during the past summer we weakened to the extent of trying it out. Before entering into a discussion of possibilities attached to stocking with fingerling trout, this thought should be paramount: The effectiveness of any plan to better fishing cannot be judged in one year, or for that matter in five years. So many factors that nature alone can control enter the picture that a prolonged trial period is necessary to arrive at any conclusions, favorable or unfavorable.

Basically, we know that years ago, before the white man's axe brought with it the threat of erosion and flood on many of our trout stream watersheds, the life cycle of the charr or brook trout constituted one of nature's marvels. The upstream surge of the adult charr on their autumn spawning migration to headwaters and springfed tributaries of the main stream, deposit and fertilization of the eggs on some tiny gravel bar where in their gravel nest they hatched and came to life in the oxygen laden water, the subsequent growth from yolk laden fry to fingerling and then adult brook trout—all of these things old mother Nature cared for in her inimitable way. Fish culturists claim today with justification that this cycle of wild spawning and growth is bringing ever decreasing returns, a fact readily understandable when we consider the silt-laden beds of many streams in the spawning areas, the smothering effect of erosion on eggs laid down, the devastating action of flood and drought.

Now, let us assume that trout, grown to the stage of from 2 to 4 inches in hatchery ponds, were liberated in May in suitable spring-fed tributatries to major trout waters. Selection of waters would be made, let us say, (1) with an eye to the supply of forage upon which the fingerlings would rely; (2) through determination of the fact that a constant and steady supply of water would be available during the summer months and (3) ascertaining that the temperature of the water would remain consistently low, in many instances under 60 degrees Fahrenheit, throughout the year. While there is certain to be a wide variation in the suitability of

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The wonderful condition of this giant bigmouth bass tells the story in a few words—"an abundant food supply".

RIVERVIEW OUTING CLUB

By ADAM J. SOCHER

The Riverview Outing Camp.

A railroader, W. Sommerville, of Verona on his regular run on the P. R. R. up the Allegheny River noticed a farm house, observing in particular that it was vacant. Every trip up and down the Allegheny River on his run he never failed to make it his business to take a look at that farm house and see if it was still vacant. It was right on the river, near good deep pools and nice heavy riffles where he and his fishing partners fished many, many times.

When the days started to warm up, the fishing fever overtook him; Bill knew he and his friends were going to have a roof over their heads for the rest of the fishing seasons they were to enjoy, not forgetting hunting also. Back from a run, he called up his fishing pals—Charles Simpson, Bill Simpson, S. H. Jones, H. P. Best and Rev. R. N. Stumpf. "You just have to come over to the house Wednesday evening at eight o'clock—I have very important news affecting each and everyone of you". Not a man was missing the Wednesday evening Sommerville told the men about the farm, its convenient location at their favorite fishing grounds. When that meeting was over some of the men were all for starting up to the house then. There was no need for high pressure salesmanship. The owner of the farm was contacted and a lease signed. At the first meeting they voted to take in 16 members.

Each new applicant was considered for his sportsmanship on the water, in the fields and woods and in his home town. Their motto is: "We will not admit as a member anyone whom I would not bring into my own home to visit with my family". This was to be a club where one's wife, son or daughter could go and spend weekends with their fisherman husband or father.

"Don't forget that all-important question of grub", we told Sommerville. "That's easy. Say we go up Friday and stay Saturday and Sunday. My wife makes out a menu for my family for the weekend and the rest of the fellows' wives who are going up do the same. There is a gas well on the farm. All the members will contribute the dishes and pots and pans. Bring your own bedding".

Some fishermen say a fellow can't be as relaxed and easy going with women at the camp. I was a guest at the club three weekends. Coming in from fishing I took off my boots put on my easy slippers and sat down to a good fishermen's feed-bag. Just as much noise as kids at a picnic. The women all have their special recipes that they cook at camp or bring along from home already cooked. They are good sports—they never seem to be bored hearing so much talk on fishing.

Every member has a key to the farm house. A record of visits is kept in a log. Each member visiting the camp signs his name and party, the condition in which they found the camp. On leaving one is asked to sign off with the condition of the river, how many fish were caught, how many fish were kept and how many released, time of day or night. Of all the times I have been up at the Riverview Outing Club I never saw one man keep more than four bass for the weekend: toward the end of the season it was mostly just two bass. When I say bass I mean they have to be at least fourteen inches. If a record of all the bass caught by the club was kept the log would resemble the fence by the vacant lot where as kids we used to keep score of a ball game called "rounders" played with a rubber ball and a flat paddle.

The fishermen of the Riverview Outing Club have been fishing the Allegheny River for years and all are of the opinion that the bass are starting a come-back, even though there are thousands more fishermen and more camping trips than other years. The Fish Commissioners are to be commended for the stocking of the Allegheny River where the water is acceptable to the different species of fish. In the last few years bass have been stocked plentifully from Kittanning up to the state line. How much more the Fish Commissioners could do if (a lot of fishermen—real sportsmen say) the fishing licenses were put up to the same price as hunting licenses —$2.00; which would just cost 17½c a month counting out 10c for writing the license. There are more trout and bass raised and stocked in the streams of Pennsylvania now than ever thought of a few years ago; also a lot more fishermen. More men are getting together and leasing places along the rivers and streams. Sportsmen are taking more interest in the waters they fish and are on the look-out for violations of the fishing laws. I have never heard of any cases of fishermen belonging to sportsmen's clubs gigging, dynamiting fish or otherwise doing illegal fishing; if there have been any such cases they were few and far between.

Besides the eight room farm house the Club also leases the ninety acres of cut over timber (ideal for rabbits) that surrounds the house. They are planning to buy and repair. You will be surprised to learn that the dues is just one dollar a month for each of the 16 members. The dues will not be raised while the property is being bought; the club is limited to sixteen members. The camp is only a couple of hours ride from Pittsburgh. One is about tired of riding and conversation is getting slow when one reaches camp.

(Continued on Page 21)

Member H. P. Best, Mrs. Best and their daughter enjoy many happy hours at the camp.

Question: I understand that when the so-called shad fly hatch occurs on Spring Creek in Centre County, some big trout are taken. When does this hatch usually come and does it occur on other streams in that section of the state? Could you give me some dope on a good artificial to use at that time?—A.G.

Answer: We'll answer the last part of that question first, and in doing so, one of the keenest authorities on trout stream insects, Chas. M. Wetzel, is quoted. He gives the following dressing for the female green drake or shad fly: "Hook, No. 6 or No. 8; hackle, badger that is dark brown in the center, with white or creamy edges; wings, mottled mallard feathers, stained a pale green; body, natural raffia grass; tail, brown feather fibres". Excellent sketches of the green drake, natural and artificial, appeared on page 2 of the January issue, accompanying the article by Wetzel. As to the time of the shad fly hatch on Spring Creek, it is usually expected to near its peak on this stream on or around Memorial Day, while on Penn's Creek, where heavy hatches of drakes also appear, shad fly fishermen expect it to occur about the same time. During the first stages of the hatch, we believe the trout to be somewhat indifferent to these flies but as the hatch progresses to near its peak stages a regular feeding orgy takes place. It has been said with truth that when this fly is on, giant brown trout that at other times are indifferent to insect hatches, "ring" the surface. To be on one of central Pennsylvania's great limestone trout waters when the rise is on and the hatch is nearing its peak is an unforgettable experience. As dusk falls over the riffs and pools, the swarms of graceful insects seem magically multiplied, the splashing rise of smaller trout and subtle gurgle as an old timer sucks in its prey add to the tenseness and excitement of those paramount moments in the fly fisherman's year.

Question: What fish belong to the sunfish family?—F.L.

Answer: Prominent representatives of the sunfish family here in Pennsylvania are the smallmouth bass, the largemouth bass, the rock bass, the calico bass, the crappie, the bluegill sunfish or bream and the common sunfish, often called "punkinseed".

Question: When does the sucker spawn in Pennsylvania?—H.W.J.

Answer: In central streams the sucker's spawning run toward headwaters and up small tributaries usually comes from the latter part of March to the middle of April, depending a lot upon the early or late arrival of spring weather. Professor Stutzman informs us that at Twin Lakes in Pike County the spawning of the redhorse sucker frequenting the lakes takes place on the shoals usually in May. Rising water temperatures in streams, affecting the ripening of the eggs in the female suckers, seem to largely influence the exact time of spawning.

Question: One of my favorite trout streams, a meadow stream fed by limestone springs, up to about ten years ago furnished fine fishing for native brook trout. Then, in some way, brown trout were stocked and the brookie fishing went back fast. Today the catching of a brook trout in this water is something to write home about, although the brownies seem fairly plentiful. Is there any way that the stream might be restored as brook trout water?—J.L.

Answer: Offhand, we'd answer in the negative. Observation in such waters leads to the belief that once the brown trout takes hold in former brook trout water, the native rapidly fades out of the picture. The two just don't seem to click together. Since the stream mentioned is now good for brown trout, we venture the statement that in the future, in spite of even heavy brook trout stocking, it will retain that status.

Question: Have read a lot about the fighting qualities of the muskellunge and am wondering whether it could be introduced successfully to other waters of the state than its present range in northwestern counties. Would this be practical?—R.Y.

Answer: Indiscriminate stocking of fish is to be regarded as one of the most serious handicaps to good fishing. While, it is true, the muskellunge is a splendid game fish, frequently attaining weights up to and over 30 pounds, this giant cousin of the chain pickerel requires a vast amount of forage for its wellbeing. It is typical of waters in northwestern Pennsylvania in which it occurs, such as Lake LeBoeuf in Erie County, to harbor heavy populations of suckers, upon which the muskie preys voraciously. The harm which introduction of this voracious fish in some of our central Pennsylvania smallmouth bass waters might accomplish, for instance, is perfectly evident.

Rite now I'm sayin' thet one o' the biggest jobs we got ahed o' us when it cums ter fishin' ez well ez huntin' is ter see that no moar land is posted Us boys wuz talkin' over feedin' game an' what cricks an' runs wuz ter be stocked cum trout seezun when Fred Hack sed ez how he didn't figger enny stockin' ud be done in Joe Starns land whare Pine Run cums out frum the gap. Now then thet medder section is one o' the best fer trout we got in this neck o' the woods an' the boys wuz plumb upsot ter hear thet no stockin' wuz ter be done since Joe hed up an' posted his land.

Most o' us hereabouts hez knowed old Joe fer a good menny yeres an' we allus found him a fare an' squair feller ter git along with. Shure he is, sez Fred, but thet ain't sayin' he won't git up in the air same ez ennyboddy else ef he's rubbed too hard the wrong way. Why, sez Fred, ontil last fishin' seezun an' then huntin' time, enny feller cude fish er hunt on Joe an' be treated grate. But along cums sum fishers an' whut do they do but cut some brand new barb wire the old man hed strung recent an' druv their car through the field rite ter the crick. Seems like thet walk o' mebbe a cuppel hundred yards wuz tew much fer 'em. Along cums huntin' time an' a cuppel nice shoats thet wude hev weighed mebbe 40 pounds apiece didn't show up the first nite. One o' them he never did see an' the other he found ded with a wad frum a shotgun shell still astickin' in its throat. Well the old man wuz fit ter tie, not thet ennybuddy cude blame him none, an' so he's goin' ter stop fishin' an' huntin' on his proppity.

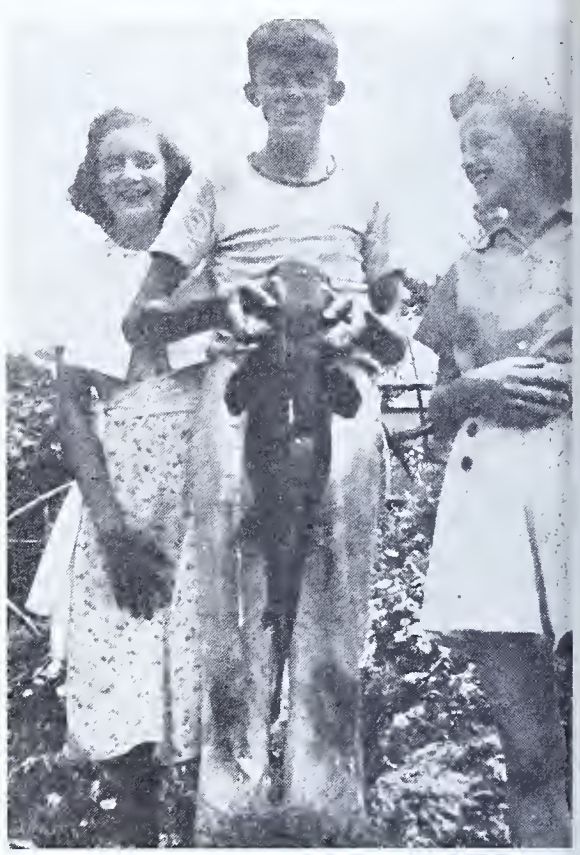
Now then, us boys got ter talkin' it over an' we figger thet o' the thousands o' fishers an' hunters in this big state o' ourn, mebbe only a handful wude pull stuff like thet pulled on Old Joe. But the wurst part is thet the uther gude sports must suffer along with a few two legged skunks who does dirty stuff like thet. One er two things like thet happenin' in a good huntin' er fishin' section does more harm ter keepin' land open than kin be undone in mebbe yeres.

Semes ter me thet us fellers who like ter play fare an' squair with the farmers hev got a mitey big problem worked out ef we all git tergether an' permote good will in fishin' an' huntin' sections.

COMMONWEALTH OF PENNSYLVANIA
BOARD OF FISH COMMISSIONERS
Harrisburg

Fish Stocked in the Waters of Pennsylvania - 1939

SPECIES	SIZE	AGE	NUMBER
Brook, Brown and Rainbow Trout	6" to 21"	10 to 48 months	1,511,834
Brook, Brown and Rainbow Trout	Fingerling		1,864,350
Black Bass	2" to 20"	2 mo. to Adult	254,101
Pike Perch	Fry to 16"	Fry to Adult	25,714,088
Yellow Perch	Fry to 10"	Fry to Adult	219,970,735
Blue Gill Sunfish	1" to 8"	1 mo. to Adult	2,020,767
Catfish	2" to 12"	4 mo. to Adult	941,447
Minnows	2" to 6"	3 mo. to Adult	949,626
Blue Pike (Lake Erie)	Fry	Fry	7,625,000
Cisco (Lake Erie)	Fry	Fry	13,600,000
Pickerel	14" to 18"	Adult	4,717
Suckers	2" to 10"	4 mo. to Adult	121,180
Frogs (Embryo)			481,169
Miscellaneous			85,600
		TOTAL	275,144,614



Using a soft crayfish as bait, Alvin McCann of Pittsburgh caught this 29½ inch catfish in the Allegheny River last July. It tipped the scales at 14¾ pounds.

The following is Commissioner French's report to fishermen covering Distribution and Construction accomplishments.

Distribution

During 1939, the Commission planted in approved waters of the State, 1,511,834 trout, ranging in size from six to twenty-one inches. In numbers they exceed the 1938 distribution by 115,762, and their weight was 192 tons. We are now holding at the hatcheries 800,000 trout for spring distribution—they will all be large size fish.

The 1939 distribution of catfish and bream more than doubled that of 1938, and we have on hand at the hatcheries, 320,000 catfish and 700,000 bream which will be stocked in the fall of 1940 and spring of 1941. These fish will be of considerable size.

Under the new policy, bass are now being held until they are at least twice the size of those formerly distributed. It is a difficult problem to raise and distribute fingerling bass, but we realize it will still be more difficult to put out larger size bass, but feel confident we will be able to do this inasmuch as the 1939 average weight of each bass stocked was greater than that of the previous year. It is hoped that eventually the Commission will be able to stock all legal size bass just as we do with trout at the present time. The Board believes it will produce much better fishing by stocking the larger bass in smaller numbers than to stock larger quantities of fingerling.

Construction

BELLEFONTE—Completion of 22 dual purpose ponds at Pleasant Gap. These are in production and will be used during most of the year for propagation of warm water species—in the winter months they will be used for holding trout for spring distribution. An additional 44 ponds are now under construction.

TANK TRUCKS—The tank trucks in operation during the last few years have proved such a tremendous success that the Board has constructed an additional eleven (11) which are now in use. In comparison, it is well to state that in 1936 when pails and cans were in use, the Board stocked approximately 129 tons of fish, requiring a truck mileage of 456,461 miles, while in 1939 there was planted approximately 305 tons, with a truck mileage of only 386,160 miles.

REFRIGERATION VAN TYPE TRUCK—This truck is capable of carrying ten tons of fish food, delivering it at the hatcheries in much better condition than previously, as the truck is insulated. It is now in operation and will save the Board a considerable amount of mileage, as one trip with this truck will be equal to two trips of the old style. During 1939, 1,069 tons of various kinds of feed was fed at the hatcheries—this item is increasing yearly.

REFRIGERATION BUILDING—Bids have been received for construction of a modern refrigeration building which will be capable of storing from 50 to 75 tons of food.

RESEARCH—The laboratory facilities are being increased by the development of a four acre plot into a fresh water biological research station.

HUNTSDALE—Completion of twenty-five large ponds for bass and warm water fish production—new modern hatching house in operation completely equipped with metal supply and hatching troughs. Acquisition of additional property below present property for continuation of propagating ponds. This new development is approximately one-half mile in length. Construction work under way for modern refrigeration building and equipment. Installation of aquarium display room for exhibition of native fish of Pennsylvania.

In the past two years this plant has been increased from 28 to 155 ponds and will have the facilities for propagating all species

Trout fishing is her favorite sport. Mrs. Rebecca Edwards, 90 years old, of South Sterling, each year takes some fine trout from waters near her home. In 1938, the largest trout landed was a 19 inch brown and last season she scored with an 18 inch brownie, according to Warden John Schadt of Lake Ariel.

of fish. This hatchery is one of the outstanding in the State.

CORRY—Adoption of a program which will materially increase the output. Remodeling of the ice house by converting it into a modern cold storage plant.

TIONESTA—Temporary conversion dams replaced by permanent dams—plans completed for installation of cold storage plant.

PLEASANT MOUNT — Installation of 40 steel tanks for raising bass. Operations started on Millers and White Oak Pond. This program was started in 1939 with the purpose of bringing this hatchery back to the very prominent place it occupied previously.

REPORTS RESTOCKING IN MONTGOMERY AREA

Wrote Mrs. Ellen A. Dietrich of Philadelphia last autumn:

The writer was afforded the pleasure, within the past few weeks, of accompanying a number of other delegates to our Montgomery County Federation of Sportsmen's Clubs in aiding Harry Z. Cole, Fish Warden of Bucks and Montgomery Counties, in removing fish from the Federation's propagating ponds and in stocking these fish in the Perkiomen and in the Skippack Creeks.

I am enclosing pictures which I took while the Beidler ponds at Abrams, were being drained. Accompanying these pictures, and correspondingly numbered, is a description of each.

From four of the five Federation ponds, Mr. Cole removed and stocked in the streams of Montgomery County the following fish which he had raised in these ponds for our sportsmen: Sunfish, 28,000; catfish, 7,000; suckers, 2,500; tadpoles, 15,050; and minnows, 42,000.

The other two ponds, in addition to the two Beidler ponds, from which the above were stocked were the Hankins' Pond near Collegeville and the French Pond, between Graterford and Collegeville.

LUCAS HEADS CENTRE CLUB

At the regular meeting of the State Centre Game, Fish and Forestry Association, held in the American Legion Home, officers for the coming year were elected. The new president is Russell Lucas, 1st vice president, Dr. Claude Gette; 2nd vice president, Edward Loding; secretary, Maynard Henry; treasurer, J. F. Kephart, and board of directors, R. Jones Hess, George Griest, Sr., Chas. Rumberger, Charles Johns, and Charles Hartle.

In addition to the election of officers many other items of business were discussed and passed on. The game committee reported feeders were being placed. Any persons desiring feeders may get them by contacting Dr. Claude Gette. Food is also available through the local game wardens.

A report on the fish feeding at the Glass City ponds was also made. It was announced that the fish retained there during the summer months, over three thousand fish in all, fed at the expense and by members of the local association, had been stocked December 3rd. The fish had attained a length of from 5 to 8 inches. A similar committee with Ed. Loding, chairman, Charles Hartle and Charles Rumberger were appointed for the coming year to continue this work. Three thousand fish are in the ponds at the present time, being fed by the committee, with more fish to be secured later.

Sentiment was expressed on rabbit stocking, over 100 having been stocked last year by the association. It was decided that a committee should be appointed to examine the sections where rabbits were stocked during the past season to determine the success of the project, and if apparently successful, similar stocking would be completed in the near future. The committee appointed consisted of Dr. Claude Gette, chairman, Charles Rumberger, and Charles Johns. Six crates of rabbits have already been stocked by the game commission.

The organization went on record as favoring a bounty on weasels being raised to $1.00, the bounty raised on grey fox, and the protection raised on skunks, or a bounty placed in the interests of game protection.

The fish commission will be appealed to in the near future for action on the water snake problem, which it was felt by the association was one of the main enemies to stream improvement, particularly during the recent dry season.

LANCASTER CLUB ELECTS OFFICERS

Ralph Sides was elected president of the Lancaster County Fish and Game Association at the association's monthly meeting held at 27 West Orange Street in Lancaster.

Other officers elected are as follows: Dan Raley, first vice president; Garvin Ross, second vice president; Walter Gibble, recording secretary; Leonard Kenderdine, financial secretary; and Harry Binkley, treasurer.

Committee chairmen named for the coming year are: Harry M. Reed, entertainment; O. H. Koerner, legislative and law; and William Kopp, fish and game.

Horace Pyle, fish warden, gave an address to the association and told of a fish trap that exists at the Holtwood dam and how it may be done away with. Pyle stated that during the migratory season bass, salmon, and shad-mullets come up the river and are trapped when the water gets low and thousands starve or are caught by fishermen with nets.

Stating that this was no fault of the power company and realizing that it would cost several hundred thousands of dollars to make the proper correction, Pyle went on to say that every sportsmen's association in the county should select, twelve men to move these fish from the shallow water to the mill race where they will be saved during the months of March and April. The power company has offered to have their men help in the transportation and also the use of several boats.

Allen Wiker, president of the Federated Sportsmen of Lancaster County, pointed out in his address to the association that over 5,600 hunters and fishermen in the county belong to sport clubs as compared with 300 in the city. He suggested that more of the city sportsmen join the local clubs and help carry the burden that is so heavy on the county at this time of the year when feeding and stocking is to be done.

The association in its report stated that over 7,000 hunters from other parts of the state came to Lancaster county to hunt during the past season and that thanks to Safety Zone signs 19,000 more acres were thrown open to the public than usual.

It was announced at this meeting that plans for the annual banquet of the Federated Sportsmen of Lancaster County are underway.

Harry M. Reed, chairman of the entertainment committee, showed motion pictures on wild life. Prizes were awarded to members.

The sauger is the smaller American pike-perch and is found from the St. Lawrence River westward through the Great Lakes, and in the Mississippi Valley west to Montana and south to Tennessee and Arkansas. It is a much smaller fish than the walleyed pike, its length seldom exceeding a foot or 18 inches and its weight a pound or two. Its color is olive-gray, sides brassy or orange with dark mottlings.

Stone Creek in Huntingdon County is a favorite trout stream with many central Pennsylvania trouters. This winter photo reveals a favorite pool near Jackson's Corner, writes Lew Greene of Huntingdon who snapped it.

HOW TO BUILD A LAMINATED TROUT ROD

By E. K. MORSE

SOME years ago the life in my best trout rod suddenly disappeared which was easily traced to a loose mother ferrule in the middle stick and the base of the butt.

In repairing the butt the handle had to be removed. The looseness there was due to a joint in the butt stick which I removed and by dismantling the butt stick of another rod I made thin slabs of different length which were spliced on to and glued firmly to the original butt stick thereby extending the stick to the extreme end of the reel seat. A new handle was then fitted on to the extended butt stick.

The gluing together of these slabs was the beginning of what has been years of disappointment and pleasure in development of a new rod.

The first and uppermost question to solve was how does a rod fail in casting and how does it fail in action?

If anything has been written on the breaking or strength of materials in trout rods, a careful search failed to dig it up.

Test pieces were then made by gluing 1/16" x¼"x2", 4"x6" long slabs of bamboo used in making split-bamboo trout rods which were tested for tension compression and bending strength by Professor Thomas of Carnegie Tech.

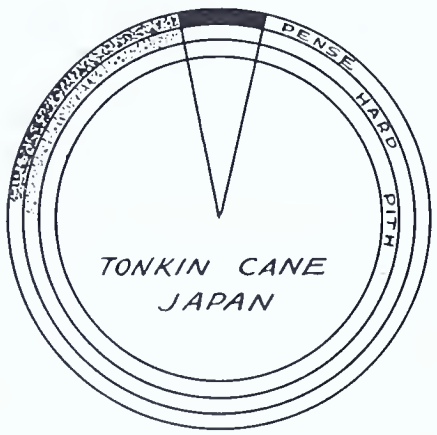
All the testing machines were designed for greater stresses and although the results were not as accurate as would have been obtained by a machine of 1,000 lb. maximum used in testing fabric, the results were accurate enough to prove that the cane was weaker in tension than either compression or bending and was primarily due to the slipping of the fibres past each other in extreme tension.

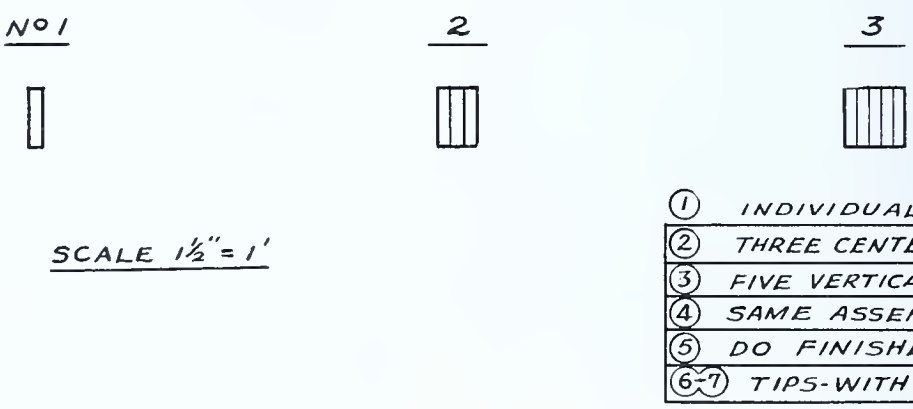
Through the courtesy of a well known builder of trout rods, high grade pieces of Tonkin Cane have been obtained from which five laminated trout rods have been made and four given severe tests with the exception of two new models of tips. All the rods have been built by assembling thin slabs glued together into rectangular sticks.

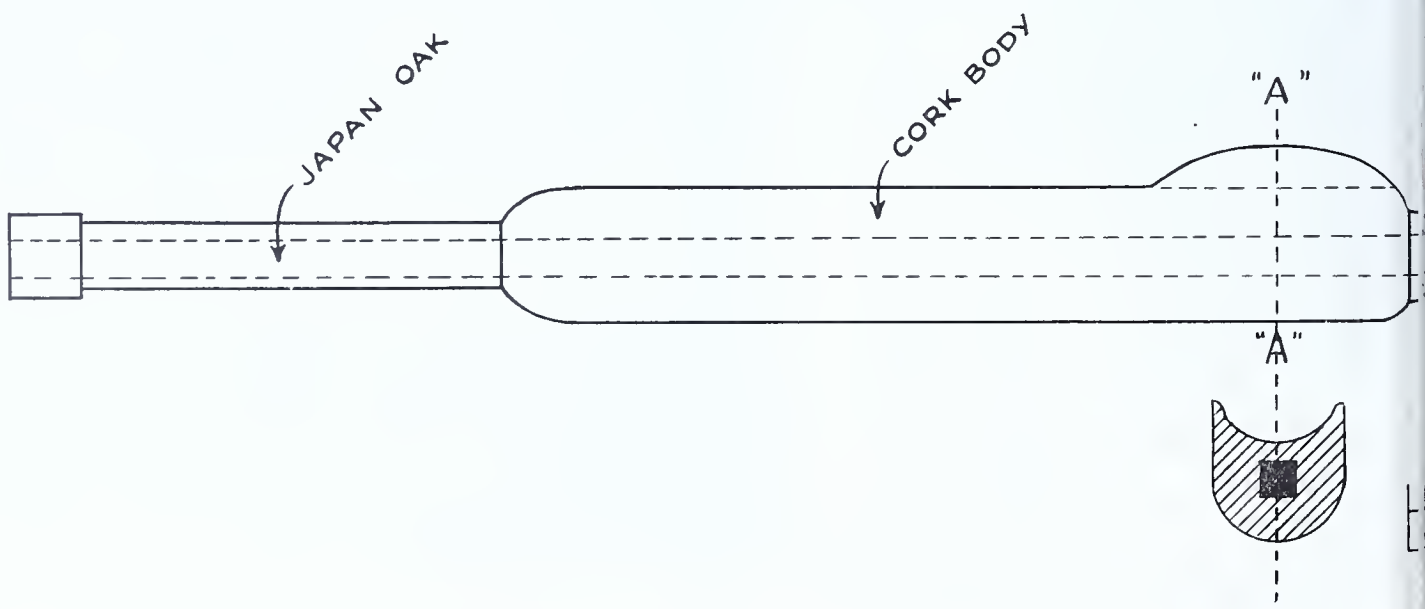
As my calling in professional life is that of Civil Engineer and as most of a long life has been spent in designing and building bridges, buildings and structural plants, it was quite natural that my first rod should be designed on theoretical lines of construction which was done and resulted in a failure, theoretically, but did demonstrate that a rod made by gluing thin slabs together was very strong and an accurate caster.

Rod No. 1

The first rod was rectangular with the long side vertical; the butt stick composed of four vertical slabs; the middle stick composed of three vertical slabs and a two piece tip. This rod is eight feet three inches (8'-3") long and







weighs 3½ ounces, is snappy but due to the rectangular form wabbles in action. One of my theories was that a rod should be designed for a load 100% vertically and 80% horizontally.

Rod No. 2

This rod was assembled with the same number of slabs as No. 1, but each stick was nearly square with the corners beveled. There was no wabble in this rod but it was hard to conceal the joints in the glued slabs, so this rod was set aside.

Rod No. 3

This rod is eight feet three inches long (8′-3″) long, weighs 4 ounces finished nearly square with beveled corners. The butt stick had five thin vertical slabs with a horizontal slab top and bottom. The middle stick had three vertical slabs with a horizontal slab top and bottom. The tips had three vertical slabs. This is a splendid rod in casting and action, but was set aside.

Rod No. 4

This rod is eight feet three inches (8′-3″) long, weighs 4½ ounces finished square with beveled corners. This rod was built the same as No. 3, but the taper of the sticks made in the vertical slabs. This stood a tough test on large trout the best of any and stood up beautifully under the roughest kind of handling on big trout in swift water. I tried to smash this rod on a 15″ brown trout in swift water and never got so much as a kink in the rod.

Rod No. 5

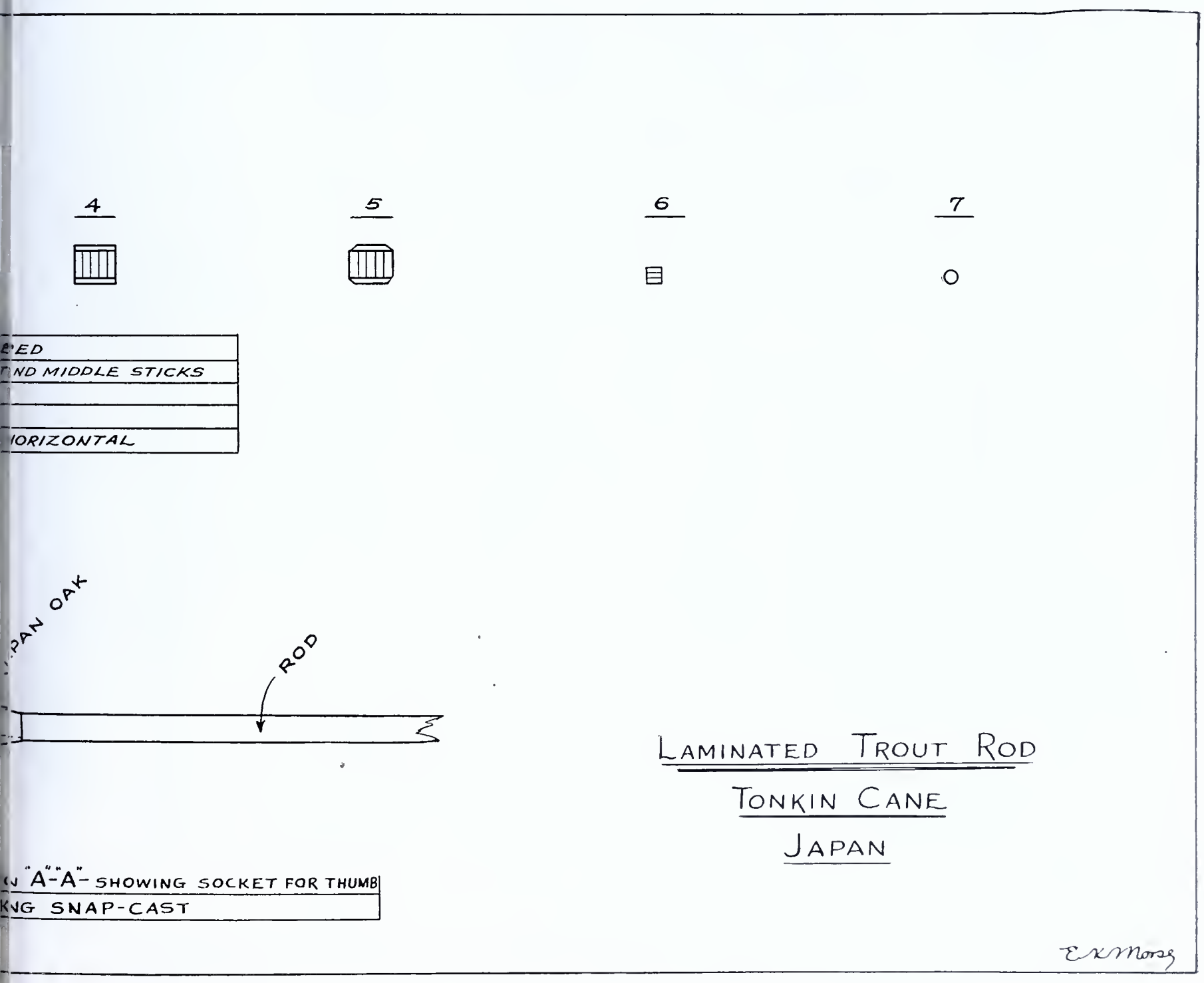
This rod is almost complete and the last one that I will make. It has not been tested out on trout but has all the refinements of rods No. 3, and 4. The butt stick has five thin tapered vertical slabs and a horizontal slab top and bottom; the middle stick is made the same as the butt stick, four tips have been made for this rod; one tip with three tapered vertical slabs; one tip with the taper in the center vertical slab; one tip with the three slabs horizontal, and one tip with a tapered square center and two horizontal, one on top and one on bottom, slabs, extending two-thirds of the length of the stick. The last two tips are finished to 3/64″ at the tip-end, and are intended for dry fly work only. This rod is nine feet long and weighs five (5) ounces. This rod casts beautifully and drops a fly with delicacy.

General Description

All these rods are finished in willow green, the color of foliage. The ferrules are painted the same color. The butt stick is continuous through the handle to the butt end of the reel seat. The curvature followed is that of a parabola with the curve starting at the agate guide on the butt stick 24″ from the butt of the reel seat and with an 8 ounce load the point of the tip comes to rest at right angles to the tangent at the butt stick.

All the rods have a specially made handle about one-half ounce heavier than the average made. They are 1″ in diameter at the reel seat, 6½″ cork, elliptical at the rod end, 1¼″ thick by 1¾″ deep, grooved on top to fit the extended thumb. These handles are made to fit my hand, are restful to the hand and give a perfect thumb action in casting. This is especially noticeable in a snap cast in close quarters which amounts to a thumb cast and is most effective in clear shallow water work on bright sunshiny days for a drop cast.

(Continued on Page 26)



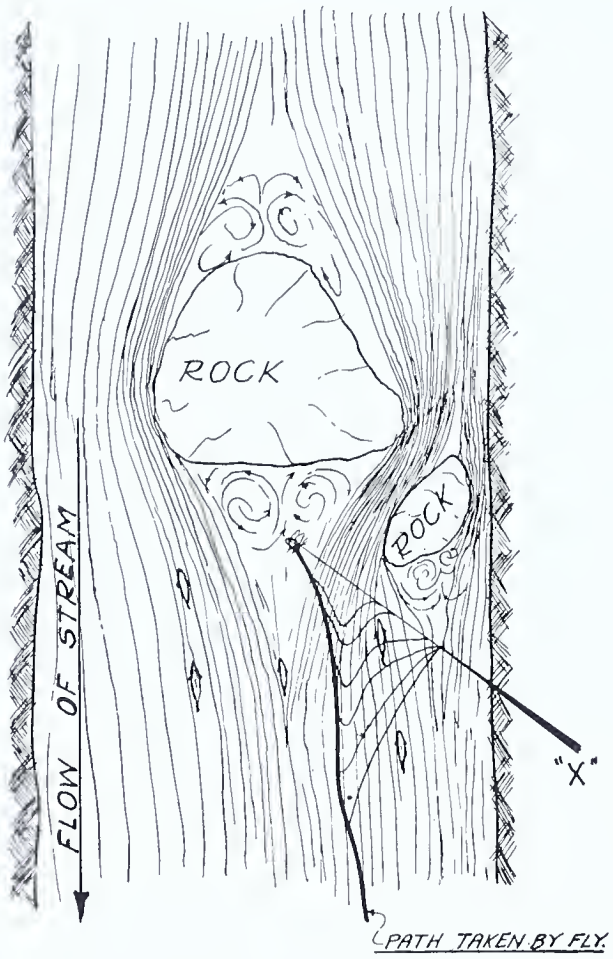


FIG. 1.

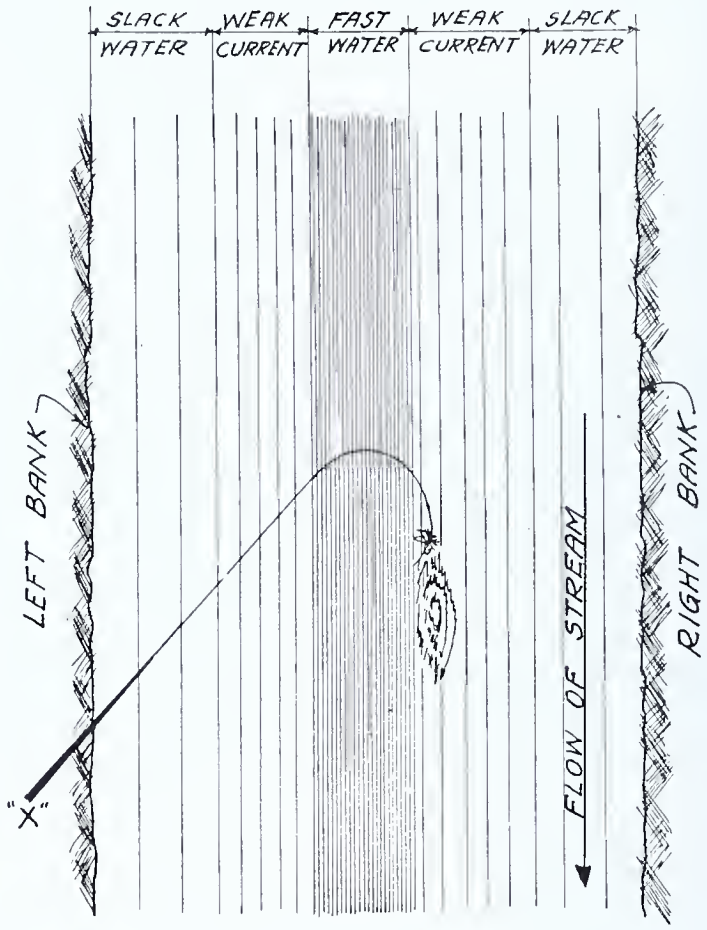


FIG. 2.

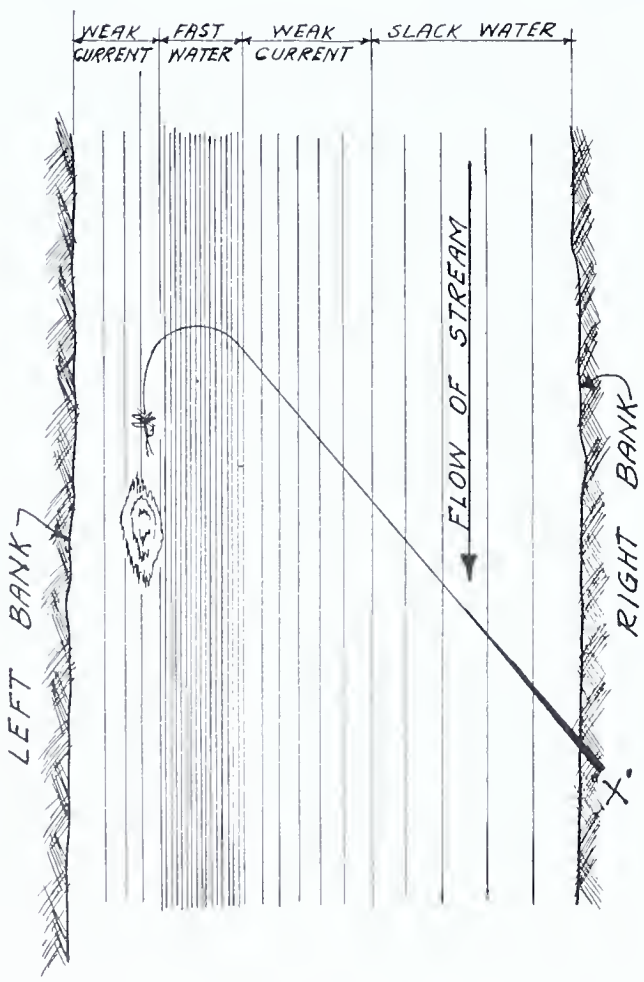


FIG. 3.

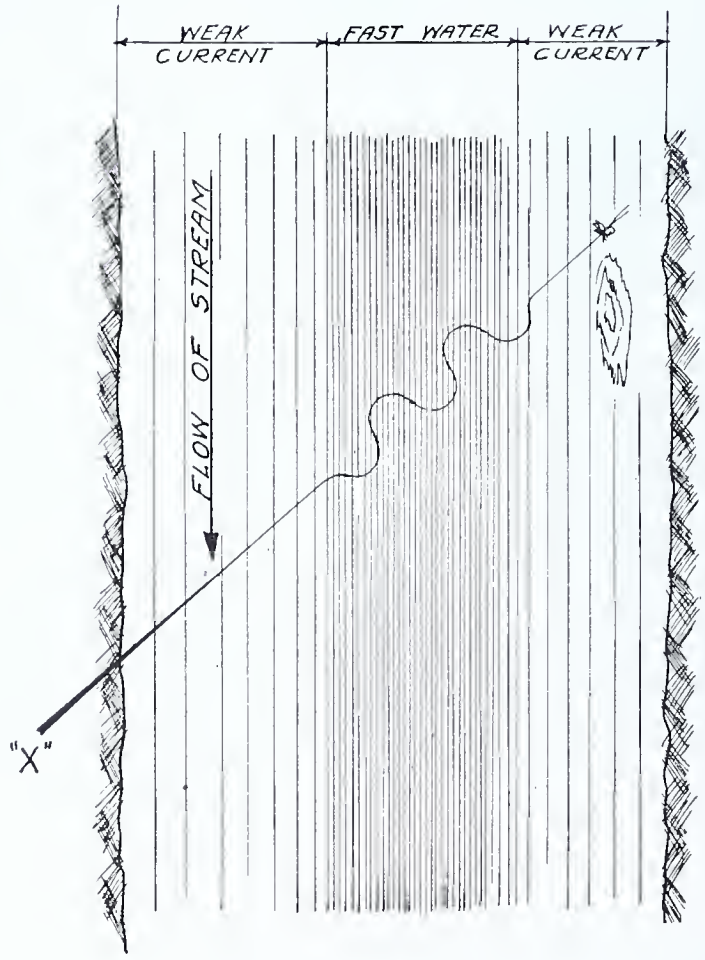


FIG. 4.

Witzel 12-35.

NOTES ON DRY FLY CASTING

By CHARLES M. WETZEL

THE angler who consistently catches trout, after others fail, does not possess a mysterious affinity with the fish as some firmly believe, but rather is the type of individual who makes a little preliminary study of each pool before attempting to wet a line. This study may include: a speculation as to the locality where fish may be hovering; the length of time which should elapse before casting—a period necessary for the trout to recover their equanimity after the usual cautious, yet blundering approach of the angler; the direction and intensity of the stream currents; and the most advantageous position for casting the fly. The first two, I shall pass over briefly, devoting more attention to currents and the avoidance of drag—the curse of the dry fly fisherman.

The majority of us fish too fast. Never be in a hurry and always exercise the utmost caution in approaching a pool. The latter is most imperative as most of us underestimate the vision of the trout. Approach the pool from below, preferably from the shore as the trout are always lying with their heads upstream, keenly on the alert for insects that may be carried down by the current. Tread softly so that vibrations will not be set up in the ground. If it is impossible to obtain the desired location without disturbing the trees and bushes bordering the creek—sit down and rest by the pool for at least five minutes. Don't be disturbed if cloudy water is coming downstream, caused by a fisherman wading ahead of you; and banish the thought of making a wider detour around him. Rest the pool an additional ten minutes; the time can be profitably spent exploring the stream bed and learning some of the mysteries of aquatic insects—a diversion almost as fascinating as fishing.

We will assume that the angler has made such an approach to an imaginary pool having a large rock in the center similar to that illustrated in Fig. 1. The sketch is more or less drawn from memory of a similar spot on the right hand branch of Hammersley Forks. We will also make the assumption that the angler is a novice in the art of fly casting and that he had taken a position on the right hand bank, designated by the letter "X."

As can be seen, the current, which was moving uniformly, becomes separated or deflected as it moves around the rock and its pace is accelerated thereby on both sides; especially so near the right bank, where due to its narrow confines it moves very speedily. Immediately below the rock is a spot where the water mills around, circling in a manner similar to that of a whirl-pool. Trout occasionally lie in such a spot, but they prefer to take up a position just at the edge of the swift water where I have so designated them.

The novice has cast his fly immediately below the rock where the water is barely moving, so that the line and leader now lay extended on the water diagonally upstream. Immediately the current gets to work and the fast water striking the line causes it to belly sharply downstream. The fly at the end of the leader can offer no resistance in preventing this downstream curve and consequently it must follow along. It now travels over the water diagonally downstream, cutting through the currents like a thing possessed—totally unlike the natural insect which serenely rides the waves, content with whatever course the current may choose to carry it. And that is drag—the bane of the dry fly fisher. Is it any wonder that the sight of the fly moving so unnaturally over the water offtimes causes the trout to cease feeding?

Before passing on to the various methods of eliminating drag, a few words on the principles of fly casting would not prove amiss. To one who is not familiar with the art, a day spent on the stream with an expert will save much time and trouble. Many little pointers, difficult to describe, can be quickly learned when seen.

One of the worst faults of the novice is in applying too much strength to the cast. It is not muscle but art that is required, so persevere and keep on trying. Always lift your fly off the water when the line is more or less taut. To accomplish this it is usually necessary to strip back through the guides of the rod, the slack line, which is always held in loose coils in the left hand. Towards the end of the forward cast, these coils can be "shot" through the guides or in other words, the momentum of the line carries them through. To facilitate this shooting of the line the rod tip should be lowered at the termination of the forward cast, so that the least possible resistance is encountered in the line passing through the guides. Only practice will teach one the correct angle of holding the rod to obtain the maximum length of cast. Large diameter guides on the rod help considerably in getting this additional distance.

The importance of the left hand in casting cannot be too greatly emphasized, for its functions are manifold. When striking the fish a firm grip should always be kept on the line to insure setting the hook. It is also used in holding the coils and in stripping off the line from the reel in getting out the requisite distance. Therefore throughout your casting always have control of the line with the left hand.

The instant you see a rise at your fly, strike quickly but not too strongly. Sometimes a mere flick of the wrist is all that is necessary, then again when a hook is cast or a long line is out, you will have to use your arm and more force. Your fish hooked, keep him well in hand. Don't give him any more line than is necessary. If he should start rushing towards you, quickly strip in line with the left hand. Later on, when you are in control of the fish, the line can be wound on the reel. If he is determined to run, let him go, but keep your left hand on the line and put all the strain on him you safely can, increasing the stress the further he goes. Keep the rod tip well up throughout the battle and when you have turned the fish start reeling in line. When he runs again, get his head slightly out of water as this quickly exhausts him. Be careful not to raise him too far, for in his struggles he is likely to escape. Now when you have worked him in close, slip your landing net into the water, lead the fish over it and quietly raise it up over him. Never make any abrupt moves or lunges at the fish with the net, unless of course he has disengaged the hook and escape appears imminent. At such times—it is unnecessary to add—one will be guided by his own involuntary reactions, the whole sprinkled with considerable blasphemy.

The trout now safely creeled, we will return to casting the fly.

The technique of casting a hook in the line represents the highest principle in the art of dry fly casting and be warned in advance that it is a most difficult accomplishment. Very few have mastered its principles, mainly on account of its difficulty and because there has been comparatively little written on the subject. At the outset let me say that I make no pretense of being a master along these lines, yet I have successfully cast hooks over rising fish and can well appreciate the merits this form of angling entails.

As before mentioned its main advantage lies in overcoming drag. Another almost as important is that the line and leader follow downstream after the fly over the rising trout. This is a most important feature as no line appears over the fish which might unduly alarm it. Everyone knows that the most successful manner of dry fly fishing is to have only the fly on the water, but as this is usually impossible, except on small brushy streams, the hook method will prove an excellent substitute.

Diagrams 2 and 3 have their limitations in being applicable only to the side cast. This is similar to the common overhead cast except that all the work is performed in a horizontal plane parallel to the water.

Refer to Diagram 2 where the usual close spaced lines represent the swift water. The rings indicate the spot where a trout has just risen on the right hand side close to the edge of the swift water. The angler being right handed is at the position designated by the letter "X" on the left hand bank.

In a horizontal plane parallel to the water, make a few false preliminary casts, stripping off line with the left hand until the required estimated distance is out. Check the final cast when the forward motion is about three-fourths completed, so that the large loop in the line will not have an opportunity of unrolling or straightening out. The line and leader will now lay on the surface extended in a hook; and if the cast has been successfully accomplished, the bend of it will be located more or less symmetrically about the center of the swift water. The current in its downward course as usual puts a belly in the line, but it will travel some distance before artificial impetus is imparted to the fly. I have seen this same cast made with the hook extending towards the left—a most difficult attainment.

Now supposing for instance that the angler has been forced to keep on the right hand bank, probably due to deep water, or some other adverse condition. A trout is rising near the far side immediately across a stretch

(Please turn Page)

of swift water—that is, near the left side facing upstream. Different tactics must be employed here.

If the angler is left handed, the same procedure can be followed as that illustrated in Fig. 2. If not, he must place himself in the position of a left handed caster—that is, the casting will be done with the right arm only crossed over the left—all being done as before in a horizontal plane parrallel to the water.

The two methods outlined above can be applied practically to any conditions, provided there is sufficient space in the rear to allow clearance for the back cast. Unfortunately such clearance—due to brush and trees—is not always available and the overhead or snake cast may be resorted to.

Refer to Fig. 4. This cast is accomplished by retarding shooting of the line. A number of coils are held in the left hand and the usual preliminary false casts are made overhead in the air. On the final cast when the critical time is sensed for shooting the line, delay its action, just a trifle. It will fall on the water as shown, sinuosities occuring in the line with the leader usually remaining straight. As usual the trick is to gauge the distance so that the sinuosities occur in the intervening swift water.

There are doubtless other tricks resorted to by anglers in eliminating drag, but the ones described above are probably the easiest to learn. All are more or less baffling and fortunate indeed is the angler, who can consistently place his fly so that drag will not occur.

BUILDING PROGRAM AT BELLEFONTE HATCHERY

Extensive building operations are being carried on at the Pleasant Gap unit of the Commission's Bellefonte hatchery.

At the lower or northern end of the hatchery, an area of four acres, bordering on the state highway, is being developed into one of the most modern fresh water biological research stations in the United States. It will be operated in conjunction with the biological research laboratory at the Pleasant Gap hatchery under the supervision of C. R. Buller, the commission's chief fish culturist.

Also under construction is a large building to be used for cold storage and as a plant for fish food preparation. It will have a storage capacity of 50 tons of food for use at the three units of the Bellefonte hatchery. The amount of food needed for the three units, Pleasant Gap, Upper and Lower Spring Creek hatcheries, is from 1½ to 2 tons per day in the fall when the fish in the ponds have grown larger.

When the expansion program has been completed there will be between 525 and 550 ponds and pools for growing all kinds of fish at the three hatcheries. In addition to trout and bass, catfish, sunfish, yellow perch and suckers will be raised. The Board of Fish Commissioners is constructing the storage plant and the W. P. A. is providing labor for construction of the ponds.

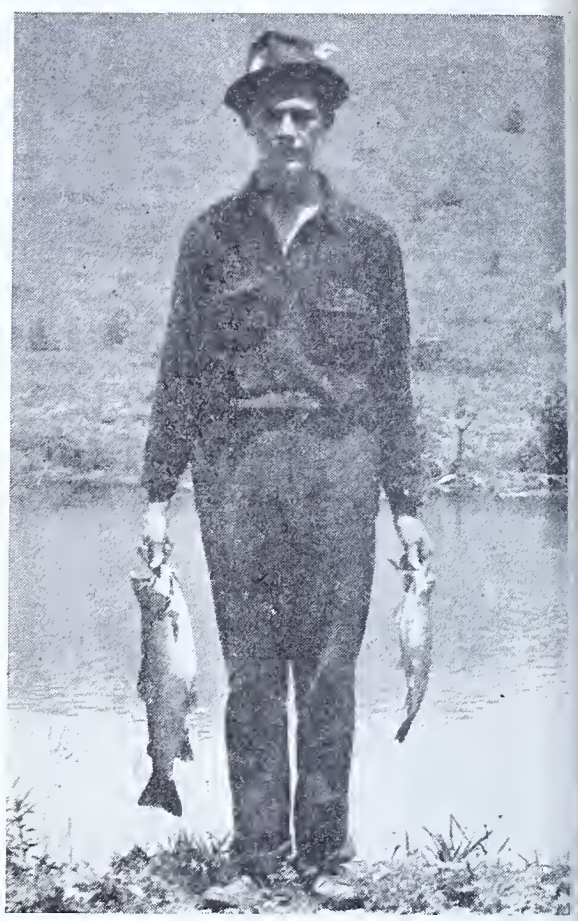
At the research station problems pertaining to the improvement of fish food in streams and lakes, fish diseases and selective breeding of fish are studied.

SEEK TO RECLASSIFY CARBON TROUT STREAMS

The Palmerton Rod and Gun Club will make official application to the Fish Commission for the reclassification of three streams in Lower Carbon County from brook trout to brown trout streams.

Secretary Ira J. Bleiler announced that at a meeting the club had voted to request the commission to reclassify the Aquashicola, Buckwa and Hunters creeks from brook trout to brown trout streams. The decision was based on a detailed study of the three streams during the past two years and general observations covering the past ten years.

According to reports submitted to the meeting, none of the three streams under question had successfully maintained brook trout other than on a season-to-season basis and that both brook and rainbow trout which have been consistently stocked by the club over a period of ten years had not thrived in these waters.



Ralph Stewart with a fine brace of rainbow trout taken last year in the Fish Commission's Spring Creek Project near Bellefonte, Centre County. The largest rainbow was 23 inches in length and weighed 4 pounds 8 ounces.

While none of the three streams have ever been stocked with brown trout there have been some unusually large brown trout caught in all three streams. Secretary Bleiler stated that the species was probably introduced to the system several years ago when the club received a shipment of small trout from the Federal government for stocking. He pointed out that brown trout will spawn in large streams whereas brook trout invariably seek smaller streams in which to spawn, thus making the Aquashicola, Buckwa and Hunters creeks ideal breeding grounds for brown trout.

It was through the efforts of the Palmerton Rod and Gun Club several years ago that Big Creek received a classification under the brown trout group after the stream gave positive indications of failing as a good brook trout stream.

George Kannapel was appointed chairman of a special nominating committee to prepare recommendations for the nomination for the offices of president, vice president, secretary, treasurer and field captain for the club for the 1940 term. Serving with him are Russell Parry, Burt Shipe, Arthur Smith and Charles Bray. Their recommendations were presented for club approval at the January meeting of the club.

Four days after it was opened to the public for fishing, Egypt Meadow dam, 74 acres in area, was one of the most popular fishing spots in Pike County, reports Warden Frank Brink who sent in this photo.

COURAGE

"The bravest man I ever knew," said the explorer, "was the chap who took a taxi to the bankruptcy court, and then, instead of paying his fare, invited the driver in as a creditor."

The sweetest of all sounds is praise.

FISHING TIPS

By WILLIAM F. GERHOLD

To a sportsman, a fish in the pool is worth two in the pan.

In the matter of size and particularly of creel limits, a true sportsman will never take all that the law allows, but will limit himself to one or two fish, leaving the others to furnish sport another day.

Many fishermen practice false economy, passing up many likely places for trout because they are brushy and inaccessible and apt to result in a lost fly or hook. In comparison with some of the other costs of a fishing trip, flies are a small item, and to forbear fishing a likely-looking place to avoid their loss is foolish. There is no more honorable end for a fly than to be lost in or near the lair of an old wily trout.

To cast a light lure with a stiff bait rod, fasten a ¼ or ⅜-ounce piece of lead to the tip of the rod with adhesive tape. This will make up for the lack of weight in the lure.

If your hook becomes snagged when fishing downstream, throw a loop of line out to be carried down below the hook by the current. When it is bellied out below the hook, several sharp jerks on the line will usually dislodge it.

A plug with a long shanked hook will usually hook more fish than one with a short hook. A double tail hook riding points up is more weedless by far than a treble.

If your wicker creel looks old and shabby, try giving it a coat of walnut varnish stain. The results will surprise you.

Allegheny River smallmouth bass. Plugging took these for my pal Bob Smith of Weirton, W. V., last July, writes E. P. Updegraff who sent us the picture.

Adam Lengis, Minooka, Chester Grzywinskie and Joseph Krolikaski of Scranton with their catch of pickerel, bull head catfish and yellow perch scored in Egypt Meadow dam last season. The six pickerel taken ranged in length from 18 to 21 inches.

Try using your fly reel reversed some time, that is, with the handle to the left of the rod. With the reel mounted in this manner, you need never change the rod from one hand to the other when it is necessary to reel in line, the reeling being done with the left hand. It may be a little awkward at first, but worth learning, in my opinion.

You can give your old flies and feathered lures a "face-lifting" by holding them for a few seconds in the steam from a kettle of boiling water. This will restore their youthful fish appeal. Caution: Use pliers or tweezers and avoid a nasty burn.

Spare the watersnake and spoil the fishing.

A dozen or so of live trout minnows may be carried all day in a pint jar if the jar is kept FILLED with water, the lid on tight, and the water changed at intervals. Keeping them cool is most important.

When refinishing your rod, you can easily draw on the bamboo an excellent rule to measure your catch. Use an ordinary pen and ink. When ink is dry brush with color preservative, such as you will need for the windings. You are now ready to go ahead with the varnish. You can put your name, monogram, etc., on any rod in this manner.

The royal coachman is one fly that can usually be depended upon to raise trout, if they are feeding at all.

If you have ever replaced a guide on your rod, you have doubtless been sorely tried by the tendency of the cussed thing to slide around the rod and peer at you from the other side like a squirrel on a tree trunk. You can put a stop to this game of hide-and-seek by putting a drop of ambroid or liquid lacquer cement on the ends of the guide and holding it a few seconds until dry.

A loop on the end of your fly line is a very convenient way of attaching your leader, and has the added advantage of being less visible in the water than a knot. Fray the end of the line with a pin and form a loop, tying down the frayed part with rod winding silk. Finish with the whip finish, which has been described in the "Angler" on various occasions. Touch up with lacquer cement or varnish. This loop will pass freely through the guides and thus when you are fishing a long leader it can easily be reeled up if necessary to net a fish.

One of the best flies that the writer has ever used for bass in the streams of this state is a white bucktail with a red body, tied on a size 6, 8, or even a size 10 streamer hook. This may seem to be a very small hook to use for bass, but fished with a size 0 spinner, it has taken some fine bass, especially when the water is very low and clear. Pickerel and pan fish, too, easily fall a victim to this little lure. Tie this fly on a 3x long hook with a red silk body, ribbed with tinsel, a tail of golden pheasant tippet, and a white bucktail wing. This should not be made either too full or too long. Paint the head black and finish with an eye in contrasting colors.

Dry your line thoroughly after each day of use if you want to get the full life that has been built into it.

Some folding trout nets are made with a frame that screws into a detachable handle. These may be equipped with a long handle for use as a boat net very easily. Procure a nut that fits the threads on the end of the frame and solder it to the ferrule on the butt section of an old rod or some other similar metal-tipped stick. The handles may be interchanged at will.

Cast thy leader upon the waters and it shall be returned to thee in a hundred folds. (Especially on a windy day.)

FISH FODDER

(Continued from Page 9)

various springs from the standpoint of their ability to carry trout, the spring selected in this instance, with its dense growth of watercress, proved ideal. Regular temperature readings made during the summer months showed no variation from the 52 degrees Fahrenheit first noted. The spring, located on private property in a central county, held a consistent flow during the extremely dry months of August and September. From the point of emergence at the base of the steep ridge to its juncture with a central county brook trout stream, a distance not exceeding two hundred yards, its course was shaded by a fine growth of timber. The watercress, beds of which literally jammed the borders of the stream course, extending out to the central channel, was found to harbor literally millions of fresh water shrimp. Charles M. Wetzel later reported classification of these organisms as *Gammarus minus*, and his assistance in determining the forage possibilities of the water was largely responsible for final undertaking of the project. To this spring tributary in early May we introduced 100 brook trout fingerlings, ranging in size from 2 to 3 inches and purchased from a hatchery deriving its water supply from limestone springs. Subsequent growth of these fingerlings was found to be encouraging and by mid-August those checked were found to range in length from 4½ to 5½ inches. Even more amazing was the brilliant coloration developed, no doubt due in large part to the shrimp diet. The major stream, incidentally, owing to pollution which occurred a number of years ago, is not being stocked by the Commission, but is now carrying a few native fish. Results from this trial stocking will be watched with interest. It would be foolhardy at this stage to make any predictions for the ultimate success or failure of this amateur trial, but the possibilities, should it prove workable, might be well worth considering. Selection of the water in which the fingerling planting is to be made is of primary importance. Also important would be a checkup on the forage available and ascertaining that not too many fingerlings are stocked in any small feeder brook. Even should stocking on one of these small feeders with its cress beds be limited to 100 fingerling trout, it is possible that with the ideal forage and cover conditions prevailing, a sufficient number to restock the major stream area into which they would move upon attaining larger size might result. On the credit side of such a plan would be, of course, the fact that these fingerlings attaining their growth under natural conditions could be relied upon to display feeding traits and habits typical of wild trout. It is to be assumed that they would give an excellent account of themselves under intensive fishing to which many of our streams are today subjected. While on the subject of forage, a single strand of watercress pulled from the stream bed at our little project was found to have its roots literally wriggling with shrimp. One month after the fingerlings had been introduced their tail fin and pectoral fins were of bright red hue while the side spots had assumed a similar brilliant coloration. Linked with their rapid growth, findings relative to this casual venture might at least be said to have proved encouraging. A final point to be considered, if additional checkup is made, would be the stocking of such small watercress feeders only with trout produced in hatcheries in limestone areas.

The Artificial Trend

Inevitably, it seems, when we discuss betterment of our trout and bass fishing, we come back to this subject of forage. That the fishermen of Pennsylvania are vitally interested in conserving the supply of "fish fodder" is increasingly evident. During the 1939 season for trout and later in the bass season, we saw more artificial lure fishermen on our waters than ever before. Many live bait fishermen, we are inclined to believe, switched from this method to fishing artificials with the fly rod or casting rod for bass. Certainly a large number using the casting rod on some of our central streams admitted that this was the first plugging they had ever tried. As one of them put it:

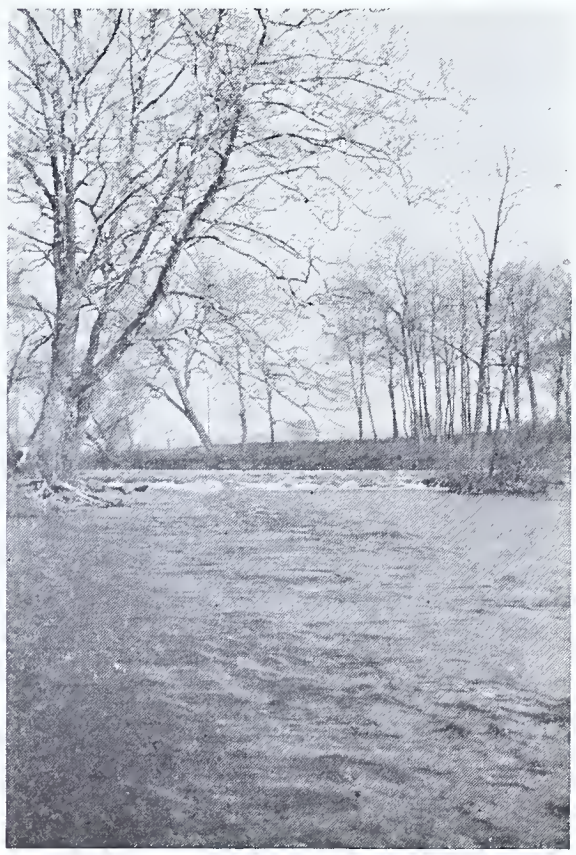
"Sure thing I've switched to plugs. It's a heck of a sight handier and there's no bother trying to keep minnows or catties alive from one fishing trip to another for one thing. These light plugs are the ticket and since I've been using a good long leader with 'em I've had more action than I ever had with live bait. Never believed it until one day I saw a plugger take three nice bass in water where I had been fishing minnows for four hours without a strike. And let me tell you, mister, this plug game is just about the nearest thing to hunting I ever tried. Putting that plug in little pockets where a good bass comes at it like a bullet sure is gunning with rod and line unless I miss my guess. I'm sold and no mistake".

And again:

"Until last Fourth of July this plug fishing and fly fishing for bass seemed like a lot of nonsense to me. Too much trick equipment and learning how to cast. But along comes a young fellow up on Sherman's Creek on July 5 with one of those baby plugs, and outfit to match, to a long hole where about 20 of us had been fishing stone catties, minnows and every other kind of bait all morning with only a couple bass that just made a little over 9 inches to show. Well sir, one of the anglerettes in the party sure did kid him about that outfit and when he said that he already had turned back a couple bass around 11 inches we just gave him the polite "haw, haw".

"Anyway, he picks out a spot between where a couple of us had our rods set, making sure he didn't disturb our fishing, and zipped that little plug across the hole. It hadn't got back more than halfway to him when wham! and he was tied into a bass that would have weighed close to three pounds if it weighed an ounce. After he had landed it, he showed me the plug he had used, gave me the names of some other light lures as he called 'em, the test line, rod and reel he was using and next day I got me an outfit pretty much like his. Man, if I'd known what I had been missing by not using plugs before I'd never have waited so long to get me this outfit. First time out, I got onto thumbing the reel and caught a 13 inch bass that was a honey. No more live bait for me".

And so the crusade to switch to artificial lures moves on, with an increasing number of converts joining the ranks of boosters. It all bodes exceedingly well for the cause of more "fish fodder" in our sundry streams and may the coming season witness an all-time record number of artificial users on Pennsylvania streams and lakes.



Some of the major limestone fed streams in the central counties, although affected by drought, maintained better flow than many of the freestone streams.

ATTRACTIVE PRIZES IN BRISTOL CONTEST

The 22 members of Van's Fishing Club, with headquarters at 1800 Farragut avenue, in Bristol, held their first annual banquet in Trenton, N. J. At the conclusion of a full-course dinner, Ollie Hobbs, club president, distributed prizes to the various winners for their prowess during the past year, the recipients being:

Walter Poulette, first in the bass class, a Shakespeare Criterion reel and Oriental wiggler; Charles VanZant, first in pickerel-pike class, Shakespeare Criterion reel; Ollie Hobbs, first in trout class, galvanized tackle box; Edward Keating and John Lane, tied for second place in the bass class, received respectively, a steel casting rod and a bamboo casting rod; Marinus Bakelaar, second in pickerel-pike class, a steel casting rod; Ben Sroka, second in the trout class, an olive-drab fishing coat.

In briefly responding, the proud prize-winners stated that all indications point to a bigger and better club next year, therefore a larger number of prize-winners.

In offering a toast to the club, Sam Smith said he hoped the club's future banquets would see an increased membership, and that the same calibre of fine sportsmanship would continue throughout the future seasons.

A prominent Doylestown member was the last speaker, who told the "Izaak Waltons" present that in his estimation angling was one of the finest of out-door sports, and congratulated the members for their fine sportsmanship in raising the size of all "kept" fish to three inches more than the legal State law calls for.

Craig Eddie on the Allegheny, viewed from the Riverview Outing Camp.

RIVERVIEW OUTING CLUB

(Continued from Page 10)

Lucky fellows you may say—yes, but there are other places that are waiting for a good group of men not afraid of a little work.

Start out when the roads are open, in the early spring, with a couple of pals, look for a fishing camp along the river. There are a lot of places—some on the river or a short distance back from the river which can be leased for a few years and if you like the house why not buy? One can expect bass fishing from Kittanning up to as far as you want to go. But for weekends 42 to 80 miles would be about right if one fishes hard the weekend and Sunday traffic is not so tough when one is not so far from home. If you get a good group of men together, have a camp on or near the river, you will look after the eddies and riffles as your own. That is why I think there are hardly any violations committed when there are camps handy. At least there will not be many around your camp as you will be on the alert to protect your pet places.

If one starts early in the year one can have the repairing done as soon as the weather breaks. Ninety per cent of these old houses have to be gone over some. The Riverview Outing Club had their first meeting in May. Now they have three boats, an eight-room house, furnished, and ninety acres of land. The camp can be furnished with the old-fashioned furniture in your attic. Who does not have an extra bed under the garage roof? There are always a few extra cups, plates, and cutlery on the top shelf of the cupboard, left from that set you bought when you were first put in the dog house for forgetting an anniversary or birthday. Your wife will appreciate new, shiny pots and pans in exchange for her old kettles and soon you will hate to leave Sunday evening. Join a club—there is one near your home; or why not start one? Help those that are trying to help you have more sport.

The officers of the Riverview Outing Club are: President, Wm. M. Sommerville; Vice-President, W. R. Simpson; Secretary, S. H. Jones, and Treasurer, Craig Simpson.

CASTING TOURNAMENT PLANS DISCUSSED

The Middle Atlantic Association of Casting Clubs held its first meeting of the year on January 10th at 1421 Arch Street, Philadelphia. Delegates from the following clubs were present: Dover Fishing Club of Philadelphia, Gloucester County Game and Fish Association, Holmesburg Fish and Game Protective Association, Chester County Chapter, Isaac Walton League, Lower Merion Rod and Gun Club, Inc., Montgomery County Fish, Game and Forestry Association, Penna. State Fish and Game Protective Association, Perkiomen Valley Sportsmen's Association, Royersford Hunting and Fishing Club, Mark P. Mills Rod and Gun Club and Upper Providence Fish, Game and Forestry Association.

Arrangements were made for an elaborate casting tournament to be held this spring in Willow Grove Park at a date to be determined later. Fly casting, surf casting, and plug casting will be featured.

For several years this tournament has been one of the features of Philadelphia's favorite amusement center, drawing casters from all over Eastern Pennsylvania, New Jersey and Delaware. Handsome prizes will be awarded the winners in the different events, and in addition to the individual prizes, arrangements are under way this year to obtain a special club trophy to be presented to the affiliated club scoring the greatest number of points.

Last year, surf casting was introduced in the association for the first time and the eastern record for that event was broken by Ralph Bowman of the Dover Fishing Club with a cast of 539 feet. Later in the year Bowman broke his own record at Margate City, New Jersey, with a remarkable cast of 570 feet.

The following officers were elected for the current year:

President—John L. Michel, Penna. State Fish and Game Protective Association.

First Vice-President—Victor Brobst, Penna. State Fish and Game Protective Association.

Vice-President—(Tournaments)—Joseph B. Vandergrift, Penna. State Fish and Game Protective Association.

Vice-President — (Prizes) — Willard Bowman, Dover Fishing Club of Philadelphia.

Vice-President—(Rules)—Lorin Ott. Gloucester County Fish and Game Association.

Vice-President — (Publicity) — William J. Ellis, Sr., Dover Fishing Club of Philadelphia.

Secretary—Ellen A. Dietrich (Mrs.)—Lower Merion Rod and Gun Club, Inc.

Treasurer — Howell I. Dietrich — Lower Merion Rod and Gun Club, Inc.

This association which was only organized three years ago with a membership of five local fishing clubs interested in tournament casting now boasts of a membership of seventeen sportsmen's clubs scattered over this section of the country. The main object is to promote tournament casting and encourage the novice to participate in this fascinating sport. Handicap events are held in the tournament wherein the novice has an equal opportunity to win a prize with the veteran caster.

Clubs interested in affiliating with this association may obtain full particulars by addressing the secretary at 2116 W. Venango Street, Philadelphia, Pa.

Sidney Berkowitz, Maple St., Wilkes-Barre, caught a pickerel, weight 2¾ pounds when cleaned, length 23½ inches, in Lake Wallenpaupack, using a plug bait, on August 6, 1939. Sheldon Tucker, 45 S. State St., Wilkes-Barre, caught a largemouth bass, weight 6 pounds 14 ounces, length 22¼ inches, girth 15 inches, in Stillwater Lake, using a plug bait, on September 2, 1939.

A brook trout to remind you of the days before the log drives. It was taken by Arnold Jackson of Rochester, N. Y. Dave Brewster of Northumberland sent in the photo.

A RUBBER CRICKET QUILLBUG

(Continued from Page 5)

them into the still soft head. If care is taken this can be done without disturbing its position. For this purpose bristles taken from an old paint brush will do but cobbler's bristles obtainable from shoe finding shops are much better. Allow the cricket to set for a couple of hours when parts of it may then be painted with a good waterproof grade of enamel paint. Paint the head, thorax, or part of the body between the head and the wings, and the thick part of the hind legs with this glossy paint. The abdomen or belly should not be painted as the color and texture of the rubber paste imitate those of a real cricket remarkably well.

I construct this cricket on a number 6 model perfect 3xxx, light wire hook with turned down eye and sometimes have difficulty in securing just the right weight wire. One does not need a very heavy hook to hold a fish securely on a fly rod, and most of the hooks of this size obtainable seem to have been designed to hold swordfish or mako sharks.

In fishing this and similar floating lures be sure to grease your leader well as otherwise a sunken loop will form in it which will interfere with hooking the fish. I prefer to use a 7 or 8 foot leader for the purpose, usually of knotless synthetic gut and never heavier than 10 pound test.

The fish usually strike this type of lure violently so see that your leader is securely knotted to the hook. This is especially necessary with the synthetic gut which is more slippery than the natural. If you use either the turle or figure 8 knot, tie an extra single knot in the bight of the leader before cutting off the excess.

The Nylon leaders are convenient and strong but we have had trouble with the knots pulling out under heavy strain. This difficulty may be overcome by giving each knot a good coating of celluloid cement and letting it set hard before use.

Seasick Passenger (on friend's yacht): "I say, w-what about going back? After you've seen one wave, you've seen them all."

CLUBS UNITE TO REBUILD DAM

There is a dam about two miles west of Cresson and about four miles from Gallitzin known as Hardings Dam. This dam at one time had a pretty body of water backed up and it was stocked with trout and bass. It also had suckers and catfish up to eighteen inches in length.

But as time passed so did the dam; high waters ate the breast and finally it was no more than a frog pond. It was rather hard for the fishermen of the surrounding places to see this. Finally the Gallitzin Sportsman Association decided to act on it.

Meeting was held by the Gallitzin Sportsman Association headed by Geo. E. Hudock, President, S. P. Clessin, Vice-President, and H. S. Wilson, Secretary-Treasurer. It was decided to ask the Keystone Hunters of Cresson to help on it.

A committee was selected and given full power to go ahead and get in touch with Cresson Keystone Hunters which was done.

A couple of joint meetings were held and plans were discussed. A committee was picked from both clubs to see B. J. Harding, the owner of the dam, about leasing the dam to the clubs.

A long lease was granted and the boys decided to make repairs. A large sum of money was spent for heavy timbers, and through Geo. H. Hudock of the Gallitzin Club who also is a Special Fish Warden, about 250 railroad ties that had been taken out of tracks were received from the Railroad company.

A group of men from both clubs with donated trucks hauled the ties to the dam.

Cars and trucks were donated to haul men and tools and work started. The work was divided into four projects headed by two men from each club. S. P. Clessin and Geo. E. Hudock was selected by the Gallitzin Club and Stu Hertzog and Robert Sharbaugh were selected by the Cresson Club. Stu Hertzog is also a Special Fish Warden. Crews were picked to saw ties to desired lengths and others to carry them where they were needed. S. P. Clessin who is a carpenter by trade had the job of constructing the overflow with the heavy timber which was purchased by both clubs. Other groups dug trenches where ties were placed on their ends.

Penn's Creek yielded this fine creel of trout to R. S. Chilton of New Buffalo, Perry County, last season.

As the day went along more men came on the job. Even fishermen that came to fish were stopped by Special Fish Warden Geo. E. Hudock and asked not to fish but come and help the boys out. This they gladly did as they saw that it was for their benefit also. All men worked hard and by evening the job was nearly licked. It took another day to finish and the boys responded again, in all there was 54 men on the job.

We are all proud of our job as we now have a beautiful dam. We have about 12 acres covered by a body of good mountain water. The stream which feeds this dam is never effected by drought. The Fish Commissioners have been asked for bass for restocking, as this is a very good dam for rearing bass.

If other clubs would only take interest in jobs like this one then we all could have better fishing in this great state of Pennsylvania.

Written and submitted by Special Fish Warden Geo. E. Hudock, of the Gallitzin Sportsman Association, Gallitzin, Pa.

MORE FISHING

Fishing as sport grows in popularity. The total number of licenses issued by States to fresh water fishermen last year was 7,436,177, which was half a million more than the year before. When the thousands of anglers permitted to fish without State licenses along the seacoasts and in the oceans are counted, the Bureau of Fisheries estimates the total as more than 12,000,000.

An interesting minor statistic is that nearly 90,000 women and children got licenses.

Fishing is not a mass sport. Its followers indulge their interest in small groups or in

Bob Smith of Weirton, W. Va., scored this catch of Allegheny smallmouth bass on plug.

olitude. It requires patience and quiet as vell as skill and, in some types, strength.

The growing numbers of fishermen do not ıecessarily mean a reaction against doing hings in crowds. Football, both college and ɔrofessional, has been well attended this ɔear. Baseball crowds broke a few records or size last season. Yet more men and women nay be turning to fishing as recreation be-ause of the opportunity it offers for quiet ınd meditation.—Editorial *Bethlehem Globe-Timcs.*

REPORT RECEIVED ON FISH TRANSFER

The following report on netting and trans-ſer of fish has been received by the Fish Commission:

Enclosed is Permit No. 104, dated March 8, 939, and a summary of work done by the Brookside Sportsmen's Club in the netting and transferring of fish and tadpoles from cave holes situated near the abandoned Peach Orchard Mine in the northeast section of Wilkes-Barre, Luzerne County.

Netting of ponds took place Saturday norning, June 3, 1939, under the supervision of Special Fish Warden Alex Lopata, Badge Number 690, Luzerne County. We had a very ine turnout of the members and extremely ine work was done by Chairman John Terpak, John Koval, Ben Antosz, Paul Burry, John Burry, Walter Gurdock, Albert Sikora, Leo Brady and Edward Craig.

Amount of fish and tadpoles netted are as follows: 3000 tadpoles with good sized legs, 700 "pumpkin seed" sunfish, and 450 catfish, 3 to 8 inches in length.

The above stated fish and tadpoles were transferred to Harvey's Lake and put in across from the Post Office.

This 29-inch walleyed pike was found floating on the surface in Lake Wallenpaupack last summer, apparently having choked to death on the 14-inch yellow perch shown protruding from its gullet, according to Peter Zikowski of Scranton. Holding the big fish are William Napierkowski and Peter Zalewski, in one of the boats owned by Greenwood Sportsmen's Camp 253, United Sportsmen of Pennsylvania.

WILLOW PLANTING

By HARRY E. WEBER

Member of the Board of Fish Commissioners

ALTHOUGH King Winter has securely locked the door to Pennsylvania's happy fishing grounds, there are many things for the angler to ponder over and plan for, that will be of vital aid to the improvement of the fishing streams through the coming season.

One of the most important methods of stream improvement, and one that can be followed in every locality by every loyal angler, is the planting of willow shoots along the banks of neighboring lakes and streams. He can organize family groups composed of the family fishing enthusiasts, or planting parties from his hunting and fishing, or fraternal organizations. In many instances, nature clubs in schools have planted thousands of willow cuttings under the leadership of local sportsmen. Boy Scouts planting groups can be formed, and also Sunday School classes.

Willow planting for stream improvement is simple, inexpensive, and effective. The most favored of the willow species for planting is the weeping willow. It can be found growing along many of the streams of the state, and is used as an ornamental tree in most every community, and as a result, the source from which cuttings can be obtained is practically unlimited.

The mature weeping willow is a thing of beauty. Its long slender branches bend gracefully over the stream, casting a soothing shade that offers a grateful retreat from the mid-summer heat. The willow is the natural home of thousands of insects that complete their life cycle within a few feet of the surface of the stream. It is an unlimited source of insect food for the fish.

The willow is an important factor in soil and water conservation. The willow root system is composed of an interlacing web of rootlets that firmly bind the soil, thus preventing the eroding of the stream banks and the resulting filling of choice fishing holes with silt. The roots not only bind the soil but absorb many times their own weight in water that would otherwise rush into the stream. The willow tends to control the source of water to the stream.

The willow has been selected by the Pennsylvania Fish Commission because of its amazing sprouting ability. Live pieces of willow, if planted under favorable conditions, will sprout with unusual vigor and grow to be large thrifty trees. The willow pieces used for planting are called cuttings. These cuttings are made twelve inches long from branches one-fourth to one-half inch in diameter. They should be made in the spring before the buds begin to swell. If they are to be kept in storage before planting they should be covered with a moist layer of sand. The healthier cuttings are those made from the current year's growth and from the top branches of the most vigorous trees. All cuts should be made with a sharp knife at an angle of forty-five degrees. Care should be taken to avoid crushing the stem, loosening the bark, or disturbing the buds.

Willow cuttings will thrive when planted where the water table is near the surface. Sites with heavy sod, dense weeds and brush should be avoided. For planting the cuttings a bar one-half inch in diameter is used. The bar is forced in the ground at a slight angle. The cutting is inserted in the hole so that not less from two to four buds extend above the ground. Cuttings planted upside down usually die.

The streams of Pennsylvania are in our keeping as a heritage for the future generations. Their value as a source of pleasure is beyond price. Economically, as an aid to modern industry, their value is so far reaching that it cannot be measured in dollars and cents. But most important of all, as important as life itself, they are the source of one of the most fundamental human necessities, pure drinking water. Pennsylvania's streams are ours to safeguard with proper protective and conservation measure, or ours to abuse and destroy by greed, or indifference. The continuation and the improvement of the stream protection and conservation program now in operation will help to protect Pennsylvania's waters for the men and women to follow.

Willow planting is one of the fundamental points of this program.

BOARD OF FISH COMMISSIONERS
HARRISBURG, PA.

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A PLUG CONVERT

By E. P. UPDEGRAFF

Having been born and raised along the banks of the Loyalsock and Susquehanna I thought I knew all that there was to know about catching smallmouth black bass—using solely live bait, but upon moving into Western Pennsylvania I met quite a character, namely Dave Frampton of Wilkinsburg, Pa., who really did know how to catch smallmouth black bass.

Old Dave, or Gravy Dave, as he is many times called, used to drive logs on the Upper Allegheny 'yars' ago and now devotes his entire time to hunting and fishing and making buckwheat cakes and shanty-fried potatoes for the boys who are fortunate enough to enjoy his companionship along the Upper Allegheny. He knows every inch of that stream and seems personally acquainted with every bass taken from it.

Many times I viewed with awe the big ones Old Dave would fetch back. They always seemed so much bigger than those I caught on live bait. I'd ask Old Dave where he caught them—his answer was always "Up the river". Tried to pump him as to what he was using for bait. Being very secretive he'd always answer, "Oh! Different kinds of bait".

Funny, I'd think. I fish the same river he does, but never saw such nice bass swimming around—and when I did see a nice sized bass there wasn't anything I had to offer in live bait that would be of any interest to the indifferent fish. This fact made me more determined than ever to 'get-in' with Old Dave and learn his secrets.

Took me almost two years of trying before I gained his confidence. Finally did, and one day he said to me, "Come out, Upde, and let's go 'up-the-river', we'll take my tent and camp out a few days. Sure was thrilled—for at last I was going to learn Old Dave's secrets of where and how he caught his big ones.

We camped near Warren. Each day—for a week—I'd catch a few legal size bass on soft shells, night crawlers, minnows and helgramites—but Old Dave using plugs for bait would trail in each night with three or four whoppers. He often kidded me and remarked that it seemed like a shame to put his bass on the same stringer with mine.

This kidding continued throughout the following winter months. It even included my five and ten cent store outfit—which name he gave my equipment. So upon his advice I purchased an outfit similar to his, but how to use it was the next question.

Many times that winter, Old Dave had me out in his back garden 'aimin' at tin cans or any other object that might catch his eye. Numerous back-lashes and clumsiness on my part sure tried the patience of my instructor who certainly barked out his instructions with an occasional burst of profanity at my seeming or real dumbness.

By early summer I thought I was pretty d—— good at throwing a plug and was just 'rarin' to go and could hardly wait the opening day of bass season. I'd show Old Dave!

The zero hour approached. Then thoughts of another week's camping along the Upper Allegheny. There must have been some doubt about that high priced casting outfit of mine —for I took my old reliable Five and Ten cent store outfit along—just in case.

This whole forenoon of the opening day found me casting just beautifully (thought to myself). I sure learned my lessons last winter. Noon arrived, but no bass; they just didn't seem to be cooperating or doing their part. Old Dave was 'round the bend', out of sight, so I picked up a few soft shells—got out the cheap outfit and caught four small legal sized bass. Was quite proud of these until that evening Old Dave returned with three big bass all over fifteen inches.

The entire week passed, always shifting from plugging to live bait fishing. Just couldn't get a bass to take those pretty plugs of mine. Yet Old Dave got his daily share of big ones.

This kinda burned me up—so driving back to Pittsburgh I said to Dave, "We'll spend a couple days every week up-the-river this summer and I'll promise to use nothing but plugs".

Every week during July and August of that summer we hied up-the-river for a day or two. I used nothing but plugs—caught no bass, didn't even get a rise. Got a few thrills when I hooked into a stone or floating stick —just kidding myself that it might be a bass —never was tho. Old Dave was still catching them, however.

Art Van Der Water and E. P. Updegraff with a fine catch of Allegheny River smallmouth bass taken on plug last season.

Labor Day had come and gone. I was licked—gave up. Ready to sell my forty dollar outfit for ten dollars.

Thursday following Labor Day was warm, calm and cloudy. Bumped into Old Dave at Sols Stores in Wilkinsburg. He said he thought they'd bite on a day such as this. I agreed with him and within two hours we were packed and off—headed for Johnson's Eddy—six miles west of Warren, a mere 150 miles from Pittsburgh.

We encountered some beautiful thunder showers enroute—the good old fashioned kind, principle part of them—rain. Ten that night found us ready to pitch our tent and those beautiful thunder showers getting heavier all the time. Ever pitch a tent in one at night and try to keep dry? Well, then you can understand what fun we had trying to keep dry and in good humor at the same time. We did agree on one thing—that we were either da—— fools or just plain crazy.

Well, those darn thunder showers continued all night.

Dawn finally arrived. We arose stretched, shivered, yawned and swore a little at the sight of a rising and murky Allegheny.

To find dry wood was out of the question so Dave suggested we row up to the riffles which is about a quarter of a mile above Johnson's Eddy and try our luck.

We anchored our boat and Dave said "Upde, try it right in those riffles. Many a big one I caught there". The water was so swift that I could hardly maintain my balance. Dave watched me make my first cast—and then something happened that I never had happen before. The biggest bass I ever saw came to the surface in that swift current and savagely smacked my plunker down. The line was tight immediately. I started hollering "Help! Help! Dave, what'll I do?" I did, pronto—slipped, rode the riffles caboose fashion into deep water and all Old Dave did was laugh at my struggles to gain my feet and land that bass—which seemed to stand in mid-air on its tail everytime it broke water on its shoreward journey.

Finally landed myself and fish on shore. Old Dave did help take it off. It just couldn't have gotten away—both upper and lower jaws locked shut by the hooks.

We rushed back to camp—Mrs. Johnson greeted us, thought someone was drowning, heard my call for help, and she ran out of her house to see what happened. Old Dave assured her it was just his buddy who hooked a big bass, got excited and fell in.

This smallmouth bass, my first on plugs, weighed exactly five pounds 2 ounces and I sure felt rewarded for my patience and feel that anyone that will stick to plug fishing will someday land that whopper that will convert him from live bait to artificial bait.

CANNED FISH OF MANY KINDS

Many table delicacies, little known outside the regions where they are packed, are included among the products of the American fishing industry, the Bureau of Fisheries has discovered in a survey which shows that more than 160 species or groups of domestic fish and other seafood are regularly used for food in the United States.

Outnumbering the varieties of canned fruits, vegetables, and meats, the seafood list contains many less familiar items whose more extensive utilization would aid in the conservation of supplies of the more popular canned fish products, the experts point out.

The greatest variety of canned fisheries specialties is canned in New York City, the survey shows. First come eels, both smoked and pickled in jelly, then canned plain and pickled mussels. Bismark herring, rollmops, and gaffelbiter are among the various forms of that fish prepared in New York for distribution to dinner table throughout the Nation.

In the country around New Orleans, Creole dishes such as crab gumbo, snapping turtle soup, and shrimp are included among the specialties offered, while, on the Pacific coast, bottled clam juice from Seattle, smoked oysters from the Columbia River territory, and canned squid from California, are cited among the mouth-watering items encountered in the survey.

The grand essentials of life are something to do, something to love, and something to hope for.

Members of the Montgomery County Federation of Sportsmen's Clubs draining Beidler Pond No. 1 at Abrams. From two ponds, 29,750 sunfish, catfish, minnows and tadpoles were taken and liberated in Perkiomen Creek, reports Ellen A. Dietrich of Philadelphia.

BOOSTER MEETING FOR APOLLO CLUB

The Apollo Community Sportsmen's Association met in regular semi-monthly session in the firemen's room of the Municipal building and attended to routine details, such as the cleaning up of odds and ends of their successful Booster Meeting on October 24 when they met with their former friends. All bills were paid and a report on the financial standing of the Association was good.

Dues were received from C. B. Daugherty, of Edmon, and one new boy, Richard Dunmire, attended his second meeting. The club ruled that in the future all boys must have attended their fifth night and have received their membership card before they can attend an open meeting of the club such as the affair on October 24.

The club decided to order some of the Wildlife bulletins published by the Pennsylvania Game Commission. These will be for sale at Pauly's Drug Store or this office at 25c each. Every lover of outdoor life will want a copy of this book which tells of all the wildlife in Pennsylvania, gives colored pictures of most of them. All boys should have a copy and it is planned to use them to advantage at the boys' meetings in the manner of textbooks.

The sportsmen also went on record as being in favor of stocking Crooked Creek with game fish and instructed their president, R. Clyde King, to take the matter up with the Fish Commission, and also gave power to W. F. Pauly to bring the matter to the attention of the Armstrong County League of Sportsmen's Associations.

The following poem was read by Mr. Pauly:

You can't buy loyalty, they say;
I bought it, though, the other day.
You can't buy friendship tried and true;
Well, just the same, I bought that, too.

I made my bid and on the spot
Bought love and faith, and a whole job lot
Of happiness, so all in all,
The purchase price was pretty small.

I bought a simple, trusting heart
That gave devotion from the start.
If you think such things are not for sale,
Buy a brown-eyed pup with a wagging tail.

They assisted in removing fish and tadpoles from the Beidler Ponds in Montgomery County. Left to right, Warden Harry Cole and M. Ellis of Norristown and H. J. Dietrich of Philadelphia.

FEDERATION TO MEET FEBRUARY 12

The Ninth Annual Conference of the Pennsylvania Federation of Sportsmen's Clubs will be held on Lincoln's Birthday, February 12, in the Educational Building, State Capitol. This meeting, an outstanding event for Pennsylvania sportsmen each year, will start at 9:30 A. M.

The Board of Directors of the Federation, who sit as a permanent Resolutions Committee, will meet all day Sunday, February 11, in going over the resolutions at the Penn Harris Hotel, Harrisburg. Anybody wishing to speak on any of these resolutions may appear before the Resolutions Committee.

Montgomery sportsmen netting tadpoles at the French Pond between Graterford and Collegeville.

WALTONIANS WILL MEET IN CHICAGO

The 18th Annual Convention of the Izaak Walton League of America will be held at the Congress Hotel, Chicago, March 28, 29 and 30, 1940.

While the schedule is only in the formative stage some of the more important subjects that will receive a prominent place are support of the Mundt bill for control of pollution on a nationwide basis by watershed, which is now before Congress; the need of protecting our rivers and streams from abuses in utilitarian development that ignore the public's right in existing aquatic values; and the increasing public demand for the protection of wilderness areas against roads and other encroachments of civilization which destroy them.

A good woman inspires a man, a brilliant woman interests him, a beautiful woman fascinates him—but the sympathetic woman gets him!

The shortest perceptible unit of time is the period between the moment the traffic light changes and the boob behind you honks for you to go.

Fish are very easy to digest and impose less burden on the digestion than other foods—a fact of particular importance in these days when so many people are of sedentary habits.

"Spring Fever", suggests Lew Greene of Huntingdon, who snapped this picture, would be an appropriate title. This shot was made in front of a Huntingdon sporting goods and hardware store before the opening of trout season last year.

HOW TO BUILD A LAMINATED TROUT ROD

(Continued from Page 15)

Rods 3, 4, and 5, are now handsome show case samples, but are striking in appearance in that they are square shouldered giving the appearance of stability, are finished willow green and have an odd looking handle.

They are durable, beautiful, short range casting, up to 40′, very accurate in a drop fly cast and simply sweet in handling a big hard fighting trout, resilient in action yet exceptionally strong.—almost stiff, yet not in the slightest harsh. The anglers can lead the trout almost at will without exciting the fish. Many a nice trout is lost by harsh treatment. Many a nice trout is lost by lack of positive rod action.

There is no pith in these rods, every fiber is of the dense dark high tension, higher bending and compression, taken from the heart of a perfect highest grade known cane.

In gluing the slabs together they are first accurately planed to finished size, thickness and taper, then sand papered, heated just before gluing and then firmly clamped between heavy steel plates, planed to perfect lines and left clamped for 24 hours for the assembling of the vertical slab sections. They are then removed, closely wrapped by strong linen thread throughout and then placed in a steel pipe through which wet steam is passing. The greatest care must be given in this process. If the slabs remain in the steam longer than is necessary to just soften the glue, the glue will start to flow which would require reassembling and regluing. Perfect steaming and then the application of very strong clamps expel all unnecessary glue and after 3 or 4 days the clamps may be removed and after slight realignment the top and bottom slabs are glued on (but not steamed) when the stick is ready for the finishing touches and the nice job of fitting on ferrules by hand with machine accuracy.

The love and devotion put into the construction of one of these hand made rods is enormous and if the time at day labor rate was kept, the cost of such a rod would be prohibitive even for an "uncivilized Pittsburger."

The expert dry fly fisherman wants a stiff rod. I claim it's all wrong. It certainly is in my case. How often one hears of an angler losing a big trout by the leader snapping in striking.

In my work I use a tip tapered to 3/64″, next to the lightest tapered line made, but here is the comeback—I make my own rods, my own leaders and tie my own flies. The hook used, and it's the secret, is a Model Perfect Alcox No. 04994, hand made, dry fly size. It is so sharp that the least wrist movement sets the hook and once set the long, sharp barb holds fast. With such a combination the trout is firmly hooked without the crude yank so often observed. I did not snap a dry fly leader during the season prior to this writing neither did I lose a nice trout, notwithstanding I am clumsy and far from being an expert in the true sense of the meaning.

Speaking of black leaders, that's one of my fads.

I have made and used colored leaders for over 15 years; the most successful one was my camouflage leader made of alternate yellow and black gut. At present I color white hanks of selected gut by immersing the gut in a strong solution of nitrate of silver for about 10 seconds, then let it sun dry and after repeating the process several times immerse the treated gut in a strong developer for not over 10 seconds at a time.

In this way a jet black gut is obtained without injury to the gut. Of late years I tie the flies I expect to use on individual leaders, generally about twelve, so that when I want to change a fly I change the leader and don't have to cut off and tie on another fly. If a trout is working, a change of flies is often necessary and the quicker the better. It is much quicker and simpler to change a leader. Each leader is encased in a transparent bag (senafin paper) and carried in a tin cigarette box capable of holding a dozen bags. The desired fly can be selected in a moment and the discarded leader placed in the empty bag.

QUARTERLY MEETING IN MONTGOMERY

The quarterly meeting of the Federation of Sportsmen's Clubs of Montgomery County was held in the Valley Forge Hotel, Norristown. There were present approximately 125 delegates and members from the fifteen affiliated clubs.

The main procedure of the evening was the installation of the 1940 officers following their unanimous election. They are as follows: President, William Stoneback, of Colmar, a member of the Lansdale Sportsmen's Club, who took the place vacated by Irwin Clemens, of Royersford; First Vice-President, J. Russell Meyers, of Ambler, a member of the Wissahickon Field and Stream Association; Second Vice-President, Howard McFarland, Oaks, a member of the Upper Providence Fish, Game and Forestry Association; Secretary, Leroy B. Seasholtz, Gilbertsville, of the Douglass Rod and Gun Club; and Treasurer, William H. Ellis, Bridgeport, of the Montgomery County Fish, Game and Forestry Association. Upon being installed, the new officers commended the work of the outgoing group and voiced the hope that they will be able to "carry on in like manner during the coming year." The new President also called upon the delegates to make the 1940 Federation slogan be "INCREASE THE MEMBERSHIP OF OUR FIFTEEN MEMBER CLUBS; and, while doing so, teach 'Safety First'—to adults and to children—thereby lessening accident hazard and property damage in our communities."

The 1940 delegates appointed to the Southeastern Division of Sportsmen's Clubs of Pennsylvania were Howard C. Shallcross, of Graterford, and John A. Miller, of Narberth.

Forrest Henry, of Red Hill, Chairman of the Federation Banquet Committee, Howard C. Shallcross and John Ruth, of Kulpsville, Chairman of the Ways and Means Committee, reported to the meeting that final arrangements are now complete for the 1940 Federation Banquet.

George Purring, of Narberth, reported that the returns on the much-discussed 1938 Annual Booklet were received and that this publication netted the Federation a profit of $375.00.

Harry Z. Cole, Fish Warden of Montgomery and Bucks Counties, summarized the activities of the Fish Committee during the past year with the information that 94,350 sunfish, catfish, suckers, tadpoles and millroach minnows were raised in the five Federation propagating ponds and liberated during the summer in Montgomery County streams.

The meeting was then informed by E. F. Browse, District Forester of Montgomery County, that in the Federation Nursery the following kinds of seeds were planted during November: pawpaw, white pine, red pine, snow berry, shellbarks and black walnuts. Mr. Browse also reported that this spring there will be available to the member clubs of the Federation, for distribution and plant-

ing in their local territories, almost 26,000 trees.

State Game Protector, Ambrose Gerhart, of Souderton, told those present that about 250 pheasants, 400 rabbits and 250 squirrels were trapped during the past month. These, with the exception of the male pheasants, were liberated throughout Montgomery and Bucks Counties. The male pheasants, in accordance with the practice of the Game Commission, will be liberated in the very early spring (preferably about March first, if the weather permits) in order that the birds so liberated will have an opportunity to become accustomed to their new environment and produce more birds during the spring and summer months before the next small game hunting season.

Work which has been done during 1939 by the inmates of the Eastern Penitentiary, who, under the guidance of Ira J. Mills, raise pheasants and quail for the Federation, was outlined by Mr. Mills. The birds which had been raised last year, as is the custom each year, will be distributed this spring to the member clubs of the Federation for liberation in their local territories. Mr. Mills pointed out that it has cost only 39c per bird to raise the pheasants to maturity. These birds at the present time are worth approximately $2.49 each.

Forrest Henry, who is also Chairman of the Federation committee which is working in conjunction with the Park Commission on the new Montgomery County Park at Green Lane, Pa., as well as Charles Hughes, of Norristown, who also represents the Federation on that committee, advised the delegates that the Montgomery County Park Commissioners were awaiting the Federation's decision on what kinds of fish should be placed in the 27 acres of water area above the large dam which was constructed last summer in the creek which runs through this park. The Park Commissioners, these men said, want the park to belong to the sportsmen of Montgomery County and desire, therefore, to cooperate in every way possible in order to make this park a place of enjoyment for the sportsmen. This winter, Howard C. Shallcross added, great crowds of people have been skating on the park lake.

E. F. Browse, Joseph O'Byrne, of Collegeville, and Ellen A. Dietrich, of Philadelphia, outlined the progress made during the last few months by the Schuylkill River Valley Restoration Association.

Frank Clamer, of Collegeville, and E. F. Browse told the group that, just two days before, they had attended the semi-annual meeting of the Southeastern Division of the Federation of Sportsmen's Clubs of Pennsylvania, at which time a number of recommendations were made by county federation representatives for legislation in the interests of sportsmen. Among the recommendations were: that feed for game be distributed during winter months; that doe seasons henceforth be State-wide whenever we have them, instead of being confined to certain counties as was the case during the past season; that it be declared legal to kill all kinds, not just some kinds, of hawks; that charges against members of the Fish or Game Commission personnel be supported by an affidavit; and that the deer hunting season open on the first Monday, instead of the first day, of December of each year.

WELTY M. DOM DIES

In the passing of Welty M. Dom of Greensburg recently, the sportsmen of Pennsylvania lost one of their most popular leaders. His death in the Johns Hopkins Hospital in Baltimore followed an illness of several months. He was 60 years old.

Mr. Dom was an ardent fisherman and game conservationist, at one time being president of the Westmoreland County Sportsmen's Association and of the Greensburg Sportsmen's Association, both of which organizations he boosted continuously. For many years he spent several months in Canadian woods engaging in his favorite sport, fishing.

Within the past year he was largely interested in having the Greenwald reservoir set aside as a fishing preserve for Westmoreland County fishermen. He was a great believer in regular exercise and until shortly before his fatal illness, he played hand-ball and volley ball at the Y. M. C. A. Mr. Dom was a member of the Y for many years and always took an active part in the annual subscription campaign for that institution.

In connection with his activities he also served as a member of the board of health of Greensburg.

Under the heading of "new business", Howard Shallcross made a motion, which was duly seconded and carried, that the Federation urge the Game Commission to continue to raise pheasants at the Fisher State Game Farm; and Mr. Shallcross and John Miller recommended that the Federation also urge the Game Commission to provide adequate policing of the Cooperative Game Farm Program Areas during future small game hunting seasons. Also, Ambrose Reynolds, a coon hunter of Norristown, requested that the Federation urge the enactment of laws which will be in the interests of the coon hunters of our State

The next quarterly meeting of the Federation of Sportsmen's Clubs will be held on the third Monday of April, when the delegates to this group will be guests of the Wissahickon Field and Stream Association in Ambler; while the Lower Merion Rod and Gun Club will be the hosts at the quarterly meeting which will be held in Narberth on the third Monday in July

LEHIGH SPORTSMEN PLAN TREE PLANTING

Realizing the value of reforestation for a more consistent water level of our major streams, the members of the Lehigh County Fish and Game Protective Association, Allentown, have placed an order for 10,000 seedling trees to be planted along the Little Lehigh.

Honorary Secretary George Zimmerman, in making the announcement, stated that the trees are to be purchased through the Pennsylvania Department of Forests and Waters and the work of planting arranged by the Department of Parks for the City of Allentown.

A similar project was carried on three years ago when another 10,000 seedling trees were planted along the Little Lehigh watershed draining the Lehigh Parkway, the property of the citizens of Allentown. Some of the previous trees planted on the park slopes of former farming fields are almost three feet in height.

The present order is to be delivered for the spring of 1940 and their planting is to augment the program of reforestration on the Little Lehigh Parkway. Expenses for the trees are again to be borne by the Lehigh County Fish and Game Protective Association.

Crater Lake, Crater Lake National Park, Oregon, described as "the bluest lake in the world," has no color of its own. It reflects sky light.

Meet the champs! Doc Howe snapped this photo of Milt Kraft, left, 1939 All Round Champion and Dick Miller, right, holder of world records for Distance Fly and Salmon Fly, at the 1939 national casting tournament at San Francisco.

HERE AND THERE IN ANGLERDOM

An unusual catch was scored last season in Unity Lake, Pike County, by Edward Miller, who writes concerning the catch: "I caught this 17¼ inch fallfish in October and am of the opinion that it was a fish that had at one time been used as bait in fishing in the lake for bass and pickerel. I do not believe this species is native to the lake for I never heard of any others being taken from it. It is probably no record fallfish but I do consider the taking of it unusual. It was caught on a small minow."

One of the nicest trout yielded by the East Branch of Tionesta Creek last season was the rainbow taken by Joseph Gretz of Creighton, according to Fred McKean, Board member from New Kensington. The rainbow, 21¼ inches in length and weighing 3 pounds 12 ounces, was caught on a worm.

Proud anglerette on July 4 last year was Mrs. Thomas Westerman of Natrona Heights. While fishing in Lake Erie she caught a walleyed pike, 27 inches in length, 15¾ inches in girth and weighing 8 pounds 4 ounces.

This 18 inch 3½ pound smallmouth bass was taken on a shiner last season by Harry L. White of Lebanon in Little Swatara Creek, Lebanon County.

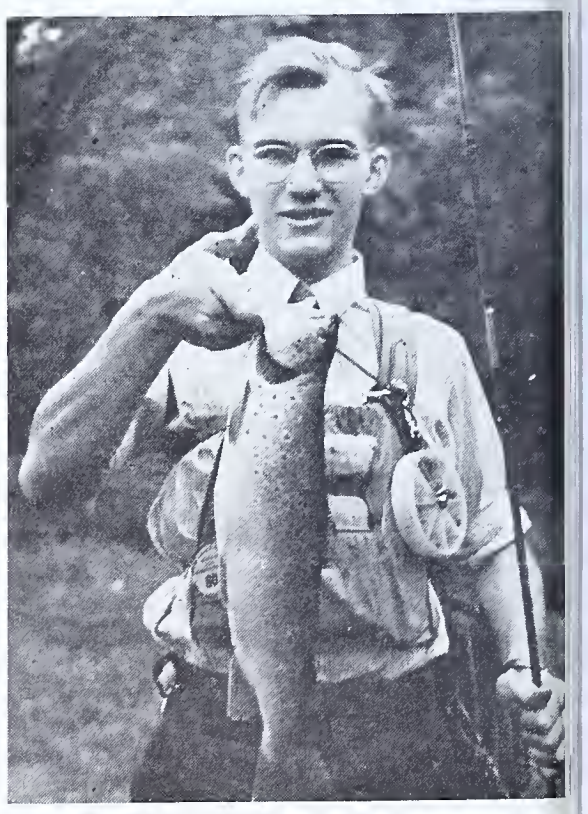
That Pennsylvania fishermen are alert to the vital bearing an abundance of natural forage has upon poor or good fishing is becoming increasingly evident. A comprehensive and highly interesting letter relative to this subject has been received from Charles E. Biddlecombe of Berkshire Heights. We quote: "When we search the streams for our live bait, we not only take from the waters some of the food the fishes depend on for their existence, but we interrupt the natural cycle that must take place if the different types of larva which we disturb are to exist. When we lift a stone in a stream in search of helgramites, notice the dozens or hundreds of crawling larvae which try to cling to the stone and hide from exposure. It is safe to say we only see a small percentage of what originally was under the stone. Those larvae which cannot hold fast to the stone are immediately swept downstream by the current and many may be devoured by fish before finding another suitable shelter. Had we not disturbed their cycle of life, a large percentage of these larvae would have grown to stage of metamorphosis and in that stage reached the peak as fish food. Next time we hunt for helgramites, let us return what stones we are able to back to their original positions on the stream bed. In hunting crayfish and waterworms, we do the same thoughtless damage. Even seining for minnows has its relative share of destruction, especially in shallow waters where the leadlines of minnow seins drag roughly on the bottom. There is nothing wrong with the bait fisherman and a certain amount of skill is necessary to be a good live bait fisherman. Some of the best sports and most conservation-minded fishermen I have met use live bait exclusively, but the fact remains that the harm being done by this removal of forage from our streams is staring us in the face. Each year the natural supply of fish food is getting less. Every season a new crop of fishermen take to the streams, and regrettably, some are very careless when it comes to conserving forage. As a closing suggestion, let us vie with one another in conservativeness. Use care and good judgment in taking only what live bait is actually needed and, if unable to keep in good condition what is left, return it to the water at the end of the trip. Let's go home from that fishing outing with the satisfied feeling that we have done as we would have everyone else do. If we all give this thought, the idea will grow with us and we will contribute our share towards keeping our streams and lakes the sources of pleasure they always have been".

Most people would rather be miserably rich than happily poor.

It is doubtful whether Big Pine Creek yielded a nicer catch last bass season than that scored by V. R. Kinley of Cogan Station. The catch consisted of a 19 inch smallmouth, weight 3 pounds 12 ounces, a 20 inch smallmouth, weight 4 pounds and a 26 inch walleyed pike tipping the scales at 4 pounds 8 ounces.

Reported A. A. Allegar, Special Warden, of Berwick, relative to trout fishing in Fishing Creek, Columbia County, last season: "Fishing Creek here in Columbia County produced several nice trout for a couple of Berwick fishermen. On June 12, William Johnson landed a brown trout 21¾ inches in length, 13 inches in girth, and weighing four pounds. On June 26, Charles Miller landed a brown trout measuring 23½ inches in length. This trout was taken near Central. While it was nearly 2 inches longer than Johnson's catch, it just weighed 3½ pounds".

A catch of five nice bass, a 24-inch muskie and a 26-inch carp was scored on the Allegheny River above Tidioute by John Motosicke and his son, John, Jr., of Tarentum, last season.

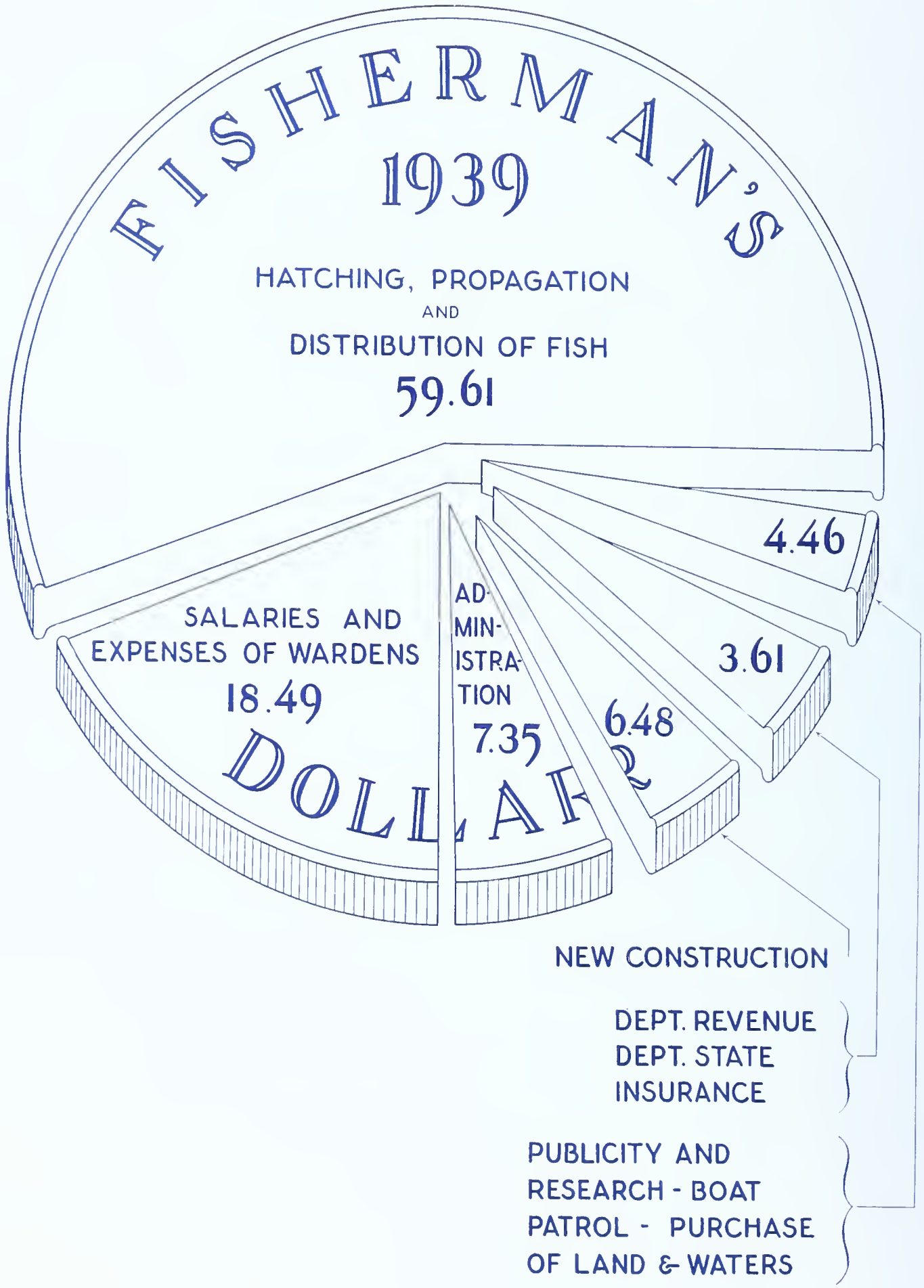


Ken Pearson of Huntingdon nailed this big brown trout at the Spring Creek Project last season with a home tied Juniata Streamer. This fly proved effective when allowed to float with the current like a nymph, writes Lew Greene of Huntingdon.

FINANCIAL STATEMENT
BOARD OF FISH COMMISSIONERS

FISH FUND — CALENDAR YEAR 1939

Balance January 1, 1939		$ 648,663.62
RECEIPTS		
Fish Fines	$ 14,167.68	
Commercial Hatchery Licenses	1,020.00	
Motor Boat Fines	210.00	
Lake Erie Licenses	2,985.00	
Non-Resident Fishing Licenses	14,800.44	
Interest	3,065.30	
Motor Boat Licenses	11,473.75	
Resident Fishing Licenses	596,082.11	
Tourists Fishing Licenses	3,851.70	
Contributions for restocking streams	10,422.25	
Sale of Publications	4,314.58	
Eel Chute Licenses	179.00	
Sale of Unserviceable Property	108.01	
Seine Licenses (Tidewater)	10.00	
Miscellaneous	9.49	
		662,699.31
Total Funds Available		$1,311,362.93
EXPENDITURES		
Administration (Salaries, Wages, Travel, etc.)	$ 41,399.16	
Protection (Salaries and Expenses of Wardens)	104,181.88	
Hatching Service (Hatching, Propagating and Distributing Fish)	335,926.31	
New Construction and Repairs	36,491.50	
By Revenue Department (Printing, Fishing Licenses, Salaries, etc.)	17,920.83	
Publicity and Research	21,854.01	
Boat Patrol (Lake Erie)	56.99	
By State Department (Employees Retirement Fund)	2,447.50	
Refunded Fish Fines	25.00	
Purchase of Land	3,288.00	
		$ 563,591.18
Balance January 1, 1940		$ 747,771.75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INSURANCE
PUBLICITY AND
RESEARCH - BOAT
PATROL - PURCHASE
OF LAND & WATERS

PENNSYLVANIA ANGLER

ANNUAL TROUT NUMBER

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RAINBOW TROUT

MARCH 1940

TEN CENTS

OFFICIAL STATE PUBLICATION

PENNSYLVANIA ANGLER

MARCH, 1940
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All contributions returned if accompanied by first class postage.

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BOARD OF FISH COMMISSIONERS

CHARLES A. FRENCH
Commissioner of Fisheries

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Vol. 9. No. 3

PENNSYLVANIA ANGLER

MARCH 1940

Fish Commission Acquires Famous Spring

WE are very happy to announce that the second largest spring in the State known as Big Spring, located at Springfield, Cumberland County, now belongs to the fishermen of Pennsylvania.

Some months ago we learned this historical property was going to be sold and immediately set the wheels in motion to purchase it for the fishermen.

This spring has perhaps the most historical background of any in the State. Records dating back to the early 1700's, all through the years, show there has been a constant flow of water, never falling below 10,000 gallons per minute. Weir tests made two weeks ago show this amount of water flowing from the spring at the present time.

We plan to improve the dam at the mill site and perhaps after the coming trout season, will drain the lake and remove the excess culm which has accumulated. No further plans for developing this property at the present time have been made other than improvement so it will be even a better fishing area than it has been in the past.

This has been one of the most famous fishing spots for the opening of trout season in south central Pennsylvania and it is not an uncommon sight to find several hundred fishermen the opening day of trout season.

C. A. French
Commissioner of Fisheries

REVIEW FOR BEGINNERS

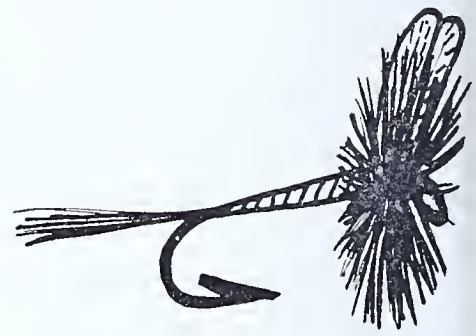
By R. W. McCAFFERTY

IN recent months, newspapers and magazines throughout the country have carried facts and figures on the increase in the number of fresh water anglers. An inspection of the licenses issued in Pennsylvania will reveal that an astonishing percentage of this increase occurs in this, one of the most thickly populated and heavily fished states. Naturally many thousands of these newcomers are tyro trout fishermen.

Much as I dislike repetition the foregoing facts prove the advisability of printing yearly an article designed to assist beginners. We all realize the value of proper equipment in any sport and trout fishing cannot possibly be an exception. True, the well known farmer boy, freckle faced and barefooted, with his crude tackle does catch fish, but he has been a bit overpublicized. Furthermore, angling is classed as a sport and the ownership of good tackle is a delight to many anglers. The beginner is usually confronted with a massive array of tackle and unless he has some information, or an experienced trout fishing friend, he is in a quandary as to what constitutes the necessary tackle and what the outlay should be.

To simplify things, it may be wise to divide trout fly fishing into two major parts. (1) Tackle and equipment. (2) The actual fishing with its attendant knowledge of fish, flies, and knots and hints.

WET FLY



DRY FLY

Rods

We shall deal first with tackle and equipment. If the person in question is an absolute beginner he will think first of a rod. This should be from 7½ to 9 feet in length. The material is usually bamboo but recently several good steel rods have appeared on the market. To define on paper to the beginner what the action of the rod should be like is a difficult task, and to be properly covered it would take many pages. Therefore I choose instead to make this suggestion. Avoid a rod with a limber action similar to a willow switch or the stiffness of a telephone pole. To be fairly safe, choose one of the advertised dry fly action as it is the opinion of many anglers that that is the better all around type. Judicious use of catalogues, magazine articles and books on the subject is second only to experience. Rods capable of giving good performance can be purchased for as little as ten dollars. I've been closely associated with one which originally cost $7.50 and after five years of use is still in fine condition. However, it was always well taken care of and never subjected to severe punishment. In view of this I do not hesitate in stating that serviceable fly rods may start at ten dollars and in some instances less. The length depends a lot on the water to be fished. Ponds, lakes and large streams may well be fished with 9 foot rods whereas a rod of that length on smaller streams would be a severe hindrance. If the writer should have to choose one rod for all trout fishing it would be 7½ or 8 feet with preference to the former. Reason: I think the average man is less handicapped with a short rod on large waters than with a 9 footer on small, bushy streams.

Take the average size of waters you fish and be governed accordingly.

The Reel

Among fastidious anglers, this part of the tackle takes much discussion. Forget the virtues of just the proper amount of drag, etc., and get a reel sufficiently large to hold your line without overcrowding.

Automatic or single action, take your choice. My preference is the *lightest weight* single action obtainable. That is merely a suggestion. I know some experts who will not agree on this.

Lines

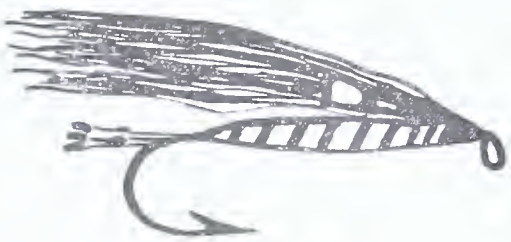
To prevent a too lengthy treatise on this I prefer to refer you to my article, "Today's Fly Lines" published in the April, 1939 issue of the "Angler."

Because the line is usually purchased after the rod, we must choose one to properly fit the rod. An old term used in this respect is "balance" and it is a bit misleading. We do not use a certain size or weight line to actually balance a rod at any given point. The idea is to choose a line of the proper weight to bring out the action of the rod. If the line is too heavy or too light the rod simply cannot do the work for which it was intended. That fact remains whether you pay $5.00 or $50.00 for a rod and $1.00 or $15.00 for a line. A cheap outfit can be balanced about as well as a more expensive one. The higher priced ones usually give longer service but do not necessarily mean a better outfit with which to fish. This is of importance to the tyro as it helps much in procuring equipment without an excessive outlay.

Numerous times I have mentioned that casting is a sub-conscious part of fly fishing. The exceptions are extra long casts or casts under restrictive conditions. For all mental effort given to your cast there is an equal amount detracted from the remaining mental portion of your angling. Therefore, balanced tackle, in the sense I have previously explained, might mean the difference between success and failure. This is speaking entirely from the mental standpoint; the physical side is equally impressive. I sincerely hope these remarks have not been taken lightly. The importance of this "balance" business must be firmly impressed in the mind of every potential fly rod fisherman. It is not difficult to attain. Instead of "just buying" a line for your rod, "buy one to fit." A little thought before you buy will save you trouble of all kinds later.

Terminal Tackle

This term we will apply to leaders and flies. We have implied that the rod and line are part of each other. This is true too of leaders and flies in another sense. Neither does a good job if the other is of inferior quality. Deception is the work of this end of the equipment. That, of course, is true of the whole of fly fishing, but because the fly is the actual lure, it and the leader must be of paramount quality. Within the fly lies the deception, the leader must help extend that deception to the utmost. Consequently



BUCKTAIL

NYMPHS

you can see the futility in compromising on the quality of either part of the terminal tackle.

What then, constitutes satisfactory flies and leaders? The following should be of some assistance in answering this question.

Leader selection depends on various things but can be pretty well covered as follows. A 7½ foot leader tapered to 2x will serve quite well for all fishing during early season, periods of high or discolored water, and for use with bucktails and streamers. Employment of leader tippets is an established necessity. By using these, two or three good leaders will last you, barring accidents, an entire season. As the season progresses, retain one 7½ foot 2x leader for all season bucktail and streamer fishing adding an additional 2x tippet to increase the length to around 9 feet. For dry flies, nymphs, and wet flies, use 9 foot 3x leaders and as proficiency is attained, add tippets to make your leader 12 feet ending in 4x or 5x. The choice of leader material, gut or Nylon is purely personal. There has been much discussion about Nylon and to be absolutely fair, judge it for yourself after a fair trial.

Flies

Let us name first the different groups of fly styles. (1) Wet flies. (2) Nymphs. (3) Bucktails and Streamers. (4) Dry flies.

The first three are designed to be fished under the surface of the water. Number 4 is for surface fishing. Because of the lack of a teacher or the necessary information, I fished for two seasons with large wet flies and wondered how anyone could possibly keep flies like that on the surface. Not until I met an old timer did I learn the difference between wet and dry fly construction. Heaven deliver you from that experience.

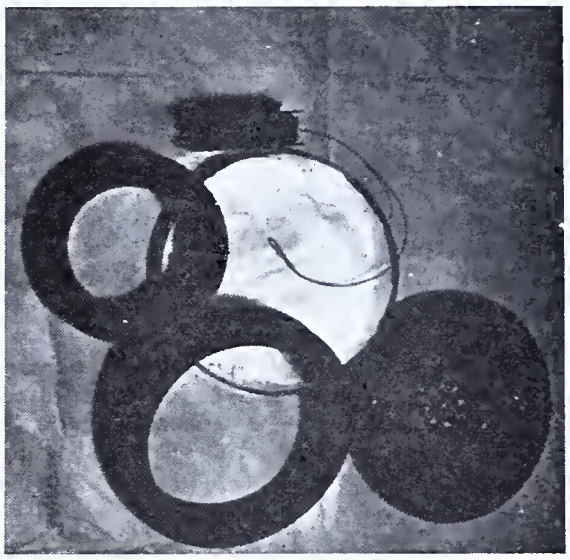
The feat of choosing quality in dry flies is a bit more difficult than in the other types. Materials and construction determine quality. Hackles and tail are the supports of a dry fly, therefore stiffness in both of these is necessary. To further increase the buoyancy, light weight hooks are used. When buying these flies, test the stiffness of the hackle and tail by jabbing them against the skin. Another test used by some men is to drop the fly about two feet onto a hard surface. If the hackles are sufficiently stiff the fly will bounce.

Important is the angle of the hackle in relation to the hook shank. They should be at right angles and good flies will remain this way for quite some time. On a stiff hackled fly, I have taken seven browns on one fly with only one dressing with a grease floatant. In late evening when time saving is essential, flies of this type are a godsend. Quality in dry flies pays big dividends and is well worth remembering when making the purchase.

Fly boxes.

The under surface group requires less, but nevertheless exacting, care if you would get your full value. Wet flies like all others, should be bought without snells. These little pieces of gut may seem a convenience but are actually a drawback. The gut is usually of an inferior grade and heavier than the fine end of a leader should be, and in addition has the annoying habit of breaking at the hook connection due to rust forming at that point. The hook should be of heavy wire to assist in prompt sinking. This is true in the case of any under water lure.

The hackles should be soft and point toward the bend of the hook. In bucktails, a steadfast personal requisite is to have the hair extend *not more* than 1/3 the length of the hook shank beyond the bend of the hook. I maintain that this reduces the number of missed rises to these flies. Unfortunately, this cannot be carried out in the case of streamers though a trailer hook can be used on all of these except marabou streamers.



Line storage box.

The matter of choosing fly patterns is next. A list of patterns which I feel would quite suitably serve the purpose for beginners could accompany this article, but that would be sticking out my neck. The *experts* cannot agree on the best ten patterns, imagine the different opinions among the rank and file. Through the entire group of flies, color balance and sizes are important. Chances are that a half dozen patterns, each in several different sizes would be a superior assortment over dozens of patterns in only one or two sizes. Often I have taken a fish on a fly of a certain pattern after the fish had splashed at and refused a different size of that same pattern.

In regards to streamers and bucktails I choose to use streamers in preference to bucktails when the fly is two and one half inches or more in length. Under that length, bucktails have served me admirably. Frequently, the longer streamer fly can be used to interest or excite the fish and then by following up with a shorter bucktail of the *same color* the fish can be hooked quickly and solidly. Experiments of this nature will prove to you in a short time, the value of a fairly wide range of sizes in each pattern.

Creel top oiler.

Though I am unwilling to go on record as recommending a list of fly patterns I will suggest a list of sizes:

	Size Range
Bucktails and Streamers..... with a few 4's and 12's	6 to 10
Wet Flies	8 to 14
Nymphs	10 to 18
Dry Flies	10 to 16

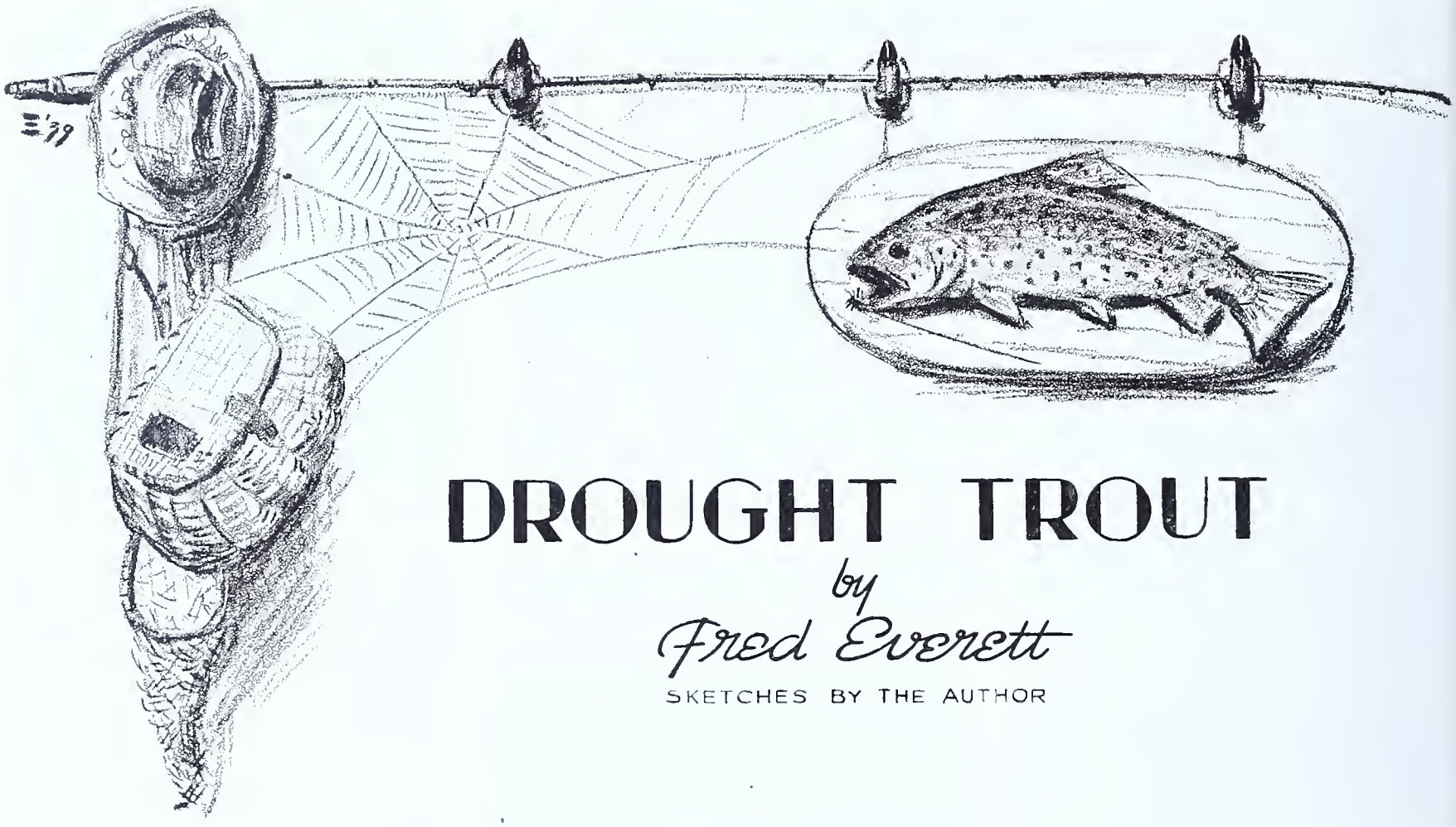
This latter group should also contain a complete color range in midge sizes 18 and 20 and the popular Spider and Variant flies. For a more complete thesis I suggest reading "Choosing Your Trout Flies," March, 1939 issue of the "Angler."

Incidentals

There are several small items which make for a more enjoyable trip astream. Some are practically indispensable. For dry fly fishing you will need an oil or grease to help float the fly. The oil can be obtained in a small bottle within a leather harness which fastens on a button on your shirt or fishing jacket. The grease is packed in tins and is carried in the pocket or creel top oiler. This latter consists of an aluminum leader box fastened to the lid of the creel by means of annealed copper wire. This is really a handy method and prevents your forgetting the dressing. Most of the American made dressings are suitable for both line and flies. If you choose oil for the flies, care should be taken in applying it. If too much is used it will cause oil rings on the water's surface which will tend to spoil your chances of raising a fish. Application of grease should be done with the fingers. Use the thumb and index finger. Take a very small amount and rub between the thumb and finger to soften it and then apply to hackles by stroking from the center toward the hackle tips, being careful not to leave the hackle fibers sticking together and looking like a sweet young thing's eye-lashes over-done with mascara. The tail fibers should also be oiled or greased.

In rough water I also dress the fly body. To dress the line, use the fingers also as I have always contended that a line greaser, which is a felt pad or lamb's wool patch

(Continued on Page 26)



DROUGHT TROUT

by

Fred Everett

SKETCHES BY THE AUTHOR

LAST summer was the dryest summer I have ever experienced. The trout season ended on July 31 — that is the legal season did. For nearly everybody, however, it ended about two months before because, after that time, there were no trout streams to fish. At least, so it seemed.

This was the first season in which I had no high water to fish, not even in April. When the season opened, the streams were almost normal. In a few weeks they were down to what should have been normal for summer. During June the flow of water was discouraging and through July and August there was practically no water at all. Streams that should have required waders could be crossed without wetting a foot and it looked impossible for the trout to find a place deep enough in which to survive.

Among my friends there was wailing and gnashing of teeth. Gloom was thick and dark and covered every angler. The fishing was ruined, so they cried, not only for this year but for years to come. Our stocking program which had built up the streams was of no avail now because the trout were gone and we must start all over again. You can't build up a stream in one year, it takes time.

So they put away their trout gear in despair and turned to other fishing, only to find the low warm waters of lakes and rivers gave them little solace. It seemed too much even for the warm water fishes. The smallmouth bass had left the eddies and found shelter among the rocks or any spot where a cool spring bubbled up from the bottom. In the lakes, the largemouth lost all his pep and interest in tempting bugs, plugs and even live bait. Catches were few and far between.

There is no question but what the fishermen had to take it on the chin last year. Nearly all had given up. Very few fishing boats were on our lakes and it had been weeks since I had seen a flyrod being whipped over a trout stream.

Then one day, after discussing conditions with a group of trout enthusiasts and listening to their gloomy complaints and prophesies of ruin for next year, I began checking over my experiences of the past season. Suddenly I realized with a jolt that I had actually had one of my best seasons in many years so far as the *dry fly* was concerned. It seemed difficult to make conditions and results synchronize and I set to work to figure out the answer. I want to give you my deductions in the hope that they may be of some cheer to those who feel that drought and trout can't mix and who are pessimistic for the future of trout fishing when drought hits their section.

It is my belief that those who are pessimistic do not know trout well enough to give them sufficient credit for wisdom to protect themselves under varying conditions and powers of adaptability to meet unusual conditions. I'm frank to confess that I had let myself fall into that attitude until I checked up on myself, due to the discovery of the fine season I had had. Then, as I began to recall many of the studies I had made on trout, I realized that my success with the dry fly was the natural outcome of the season we had been having and that I should have been expecting my good luck.

In other words, low water is dry fly water. During high water we turn to the wet fly, for the trout are down, feeding on nymphs and other food stirred up by the force of the water or washed into the stream from the banks. The dry fly has little success in high waters. But as the waters go down, the dry fly has more power. I used to think it was the time of year that made the difference but now I don't think it has so much to do with it as the amount of water. At least, that's what I think for the moment, based on this year's experiences.

To show how I have reached that conclusion, I'll follow through the conditions under which I have fished and the results, both in New York and Pennsylvania. Maybe you will reach a different conclusion or maybe you will agree with me.

Last spring was an unusual one because we did not have any spring floods nor excessive high waters. At the opening of the trout season in New York and also in Pennsylvania, the streams were much lower than I can remember for many years back. Near Harrisburg, trout were taken on the dry fly and on returning to New York a couple of days later, I also caught some on the dry fly, a stunt I had never accomplished before. This came in spite of cold weather, for we had a late spring in the Catskills. The only change in conditions from previous years was the height of the water, which was about normal for later in the season when we would naturally be using the dry fly.

One experience I had on the Beaverkill, but which actually covered two trips, stands out clearly. A group of my friends from the New York Conservation Department and I were out for an afternoon's fishing and we went to open water which we had never fished before. The water was low and crystal clear, as is usually the case with the Catskill streams. The fellows doubted the chances of taking trout. One even put on wet flies. He did not take fish. But on the dry fly fish were taken, only they were not big ones. The fishing had been in pools. Just before leaving, I started up stream to look the water over and, while passing a swift run, I carelessly cast my fly into the fast water. It was only a small run and I expected nothing—so I missed the dandy brown that hit my fly. He wouldn't come again, so I tucked

away a memory of him and hurried to join the others who were leaving.

A few days later I was back at this section of the Beaverkill with Joe, a fishing sidekick. On arriving, we found two anglers from New Jersey, a doctor and a medical student, who were new to the waters. After a talk, the medico started to fish ahead of me, as agreed. I noticed they fished the pools and smooth water and passed by the spots I had in mind to fish. Since they were good sportsmen, they did not disturb the water by splashing through the pools and runs, so I fished a short distance behind them.

They failed to raise any fish and soon returned to where I was fishing to talk things over. As they reached me, I hooked a nice brown and landed him. The student laughed and said—"If I hadn't seen that with my own eyes, I'd have said there wasn't a trout in here".

As I sat cleaning my trout, he looked into my creel. I had six of fair size, taken out of the waters they had passed by, that is the swift runs, not the pools. They hadn't fished these runs because it was too early to do so, according to most years. I shouldn't have done so but for that careless cast on the previous trip.

As you know, there are times when the trout are in the pools and times when they are in the swift water. This year they had gone up into the rifts and runs earlier than I had remembered. I think the low water was one of the reasons. I figure it this way. Trout know that in low water the pools are clearer and the surface smoother, all of which makes them easier prey for their enemies. So they seek water which is rough and broken as is found in the swift stretches and among rocks that break the surface and make the water swirl and distort vision from above. Only small fish stay in the clear waters of the pools or very big ones which hide all day and come out to feed at night.

The medicos looked in surprise at my catch and then asked me if I'd be willing to tell them how I caught the trout, since they were new to that kind of stream. Well, they were such likeable, good sports that I decided to take a chance on fishing the next spot for them. After showing them the fly I was using (most any fly was good that day), I went to the next spot and got ready to cast my fly.

I had noticed that both medicos were using a long line, a thing which can't be done successfully in low, twisty water. So I outdid even myself in shortening up on my line—in fact I had nothing but my 12 ft. leader beyond the tip of my 7½ foot rod. I walked up to within 10 feet of the spot where I thought a fish would be and cast the fly a foot or so, further upstream. Only the fly and one or two sections of my leader were in the water. Remember, this was crystal clear water but also remember, it was swift and so I knew that the trout couldn't see me if I couldn't see him.

As the fly passed over the spot I had picked out, a good-sized trout struck. But—and I deserved it for showing off—I made a complete miss. However, I had proven my point because I heard one medico say—"You can't fish that way—I've never seen it done".

Nevertheless, when I backed out of the water and pointed out another spot to him, he did as I had done and on the first cast raised a fish. After that I knew I had two converts to the short line. I often wonder how they made out on the rest of their trip.

For a number of weeks the waters were gradually getting lower but were still about average for the summer months. This was in late May and early June. Doc. Gardenier and I had some of the best dry fly catches we have had in many years. Then I had to go to Albany to do some work for the Conservation Department and I didn't get onto my streams for a long time. One day in July I started home early and reached a favorite stream about 4:00 P. M. I decided to give it a try and got a double surprise.

When I reached the stream, there wasn't any, except a few small trickles here and there. I had never seen the stream in that condition before and I sat down full of despair. It was awful—that's all! It actually made me feel sick. It didn't seem possible that trout could ever survive such a drought. So I sat and looked and thought. At first my thoughts were pretty sour. Finally, I got to wondering where the trout could possibly go during this low water and I decided to have a look. I picked up my rod and worked my way upstream without wetting a foot as I crossed back and forth over the stream bed. Finally, I came to a spot where the water ran against the bank under some brush. There were two or three tiny pools with a fairly good current a few inches wide. Between two rocks the water eddied and then almost disappeared after tumbling partly over and past the last rock.

I looked at the spot a while. It was about a foot wide and two feet long, dark enough to be a hole and might hold a small trout. With that in mind and wishing to test out my idea, I made a few casts into the hole. I had on a size 14 Royal Coachman Fanwing. The first couple of casts dragged through the run and naturally nothing happened. I changed my position and then cast so that my leader lay over the rock at the foot of the hole and my fly hit the current coming into it. The fly entered the eddy and made a couple of slow turns of the hole before being caught by the outgoing current.

As the fly started to leave the little hole, there was a tiny flick such as a fingerling might make, so I tried to jerk the fly away. Then I got the surprise of my life—the fly was on its way up that small current. It was a terribly one-sided fight, the trout had no place to go. Soon I had it landed and I am

(Continued on Page 24)

CATERPILLAR MAGIC

By E. LLOYD KING

IN the opinion of many veteran fly fishermen, first grade Spanish silkworm gut in all its possibilities has never been successfully imitated. Despite the ingenuity of man, painstaking experiments on stream and in laboratory, investments running into thousands of dollars, nothing has ever been found with positive certainty to surpass the innards of the lowly caterpillar as terminal tackle and were it not for this capricious little worm, fly fishing might never have attained the present high degree of skill and artistry.

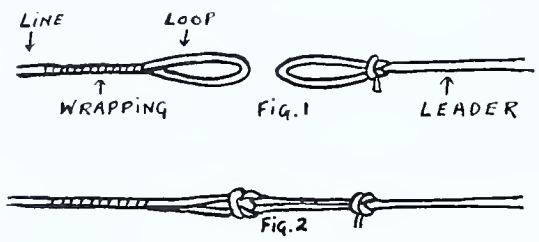
The silkworm is a snooty little aristocrat and American climatic conditions do not agree with his royal debility. The finest gut for leaders is produced in a limited section of Spain. Fed on tender mulberry leaves until the caterpillar reaches full growth, after certain chemical treatment, the silk glands are removed from the worm by skilled experts. These glands, subsequently treated by specialists, eventually become leader material. It is from the word caterpillar that the term "cat gut" originated and not because this wiry substance has any connection with the interior mechanism of sundry backyard fence serenaders as many small boys so fondly seem to think.

True, numerous substitutes have been produced, tried and often as regularly discarded down through the years, a very few apparently satisfactory for certain types of not too particular angling. But for the dry fly man as well as for the nymph and wet fly devotee, all challenging the highest pinnacle of inland angling skill and usually demanding the most fragilly thin points, only the best grade Spanish silkworm gut became generally acceptable. Some developments perhaps came mighty close to answering the purpose, but hard routine use always seemed to bring out a drawback or two—either fancied or real.

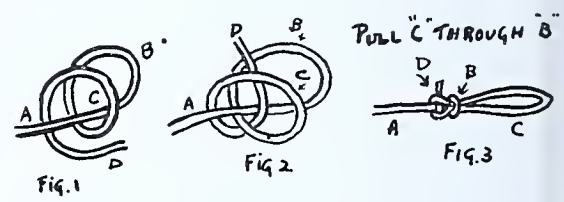
During the past season or so, a new product came on the market hailed as the real thing and American dependency upon European independency or uncertainty was to be over at last. The product was greeted enthusiastically by fishermen, purchased in great quantities and may—with continued use and refinement—prove to be the long sought manna. But significant in the extreme, during the latter stages of the 1939 season, the material was not much in evidence among the dyed-in-the-wool Keystone flymen, that faithful little army who stuck with the trout until the last gun was fired July 31st. Its greatest drawback seemed to hinge on behavior or lack of confidence in the finest drawn strands, and slipping knots on various diameters. Strange to say there were few complaints due to loss of fish, but rather flies. And many the fly has been snapped off not on account of any leader shortcomings, but mainly due to faults in the casting technique or too powerful a rod. Also many the knot has slipped not due to any lack in the leader material, but rather the careless or improper manner in which it was tied.

Hundreds of anglers have argued pro and con a winter through. No doubt the product was over-acclaimed at the beginning—by the fishermen. Some of the latter praised it so exceedingly at first that often had the trout entered into the spirit of the occasion, the speckled warriors would probably have taken to snapping at leaders. Qualities were attributed to it, frequently by fellows who had not as yet tried the material, far beyond the probable dreams of the originators themselves. The impression became prevalent that the material was flawless, perfection itself; it would sink faster than genuine gut, and float better, somewhat contradictory; it was lighter, yet much stronger, probably true; easier to tie, colorless, invisible, wouldn't snap off, stretched mightily before tearing, etc. There was no precedent from which well defined conclusions could be drawn from previous use on a widespread scale. Fishermen who had snapped off flies on Spanish gut also began to lose them on the new leader; anglers who had tied shoddy knots on the European product did likewise on the Yankee entry—then in chagrined irritation royally condemned it to all and sundry. As so often is the case with too enthusiastic a welcome—when the pendilum swung the other way, criticism was just as unreasonably too pronounced.

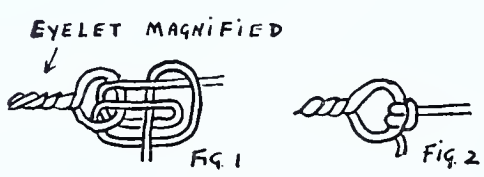
Extreme follows extreme, it seems in America; the new material properly employed and in the right manner surely has its usefulness. It certainly excels anything yet



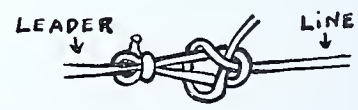
NON-FOUL LINE - LEADER CONNECTION



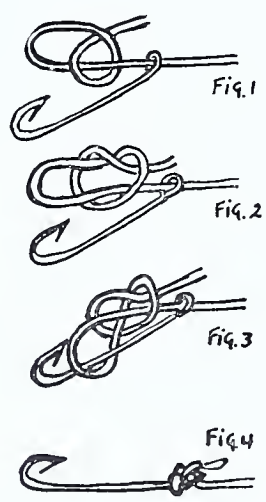
LEADER LOOP - IN. FIG 2 PULL LOOP "C" THROUGH "B"



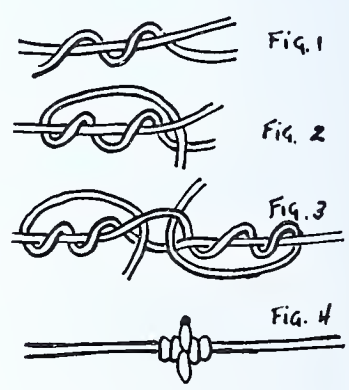
DOUBLE O — FOR RINGED EYE HOOKS AND SPINNERS - FIGURE 8 AND TURLE NOT ADVISABLE ACCOUNT LARGE STRAIGHT EYE.



QUICK SECURE METHOD OF ATTACHING LEADER TO UNLOOPED LINE.



TURLE KNOT - SAFE AND EASY FOR EYED FLIES.



BLOOD KNOT — BEST FOR ADDING TIPPETS OR REPAIRING BREAKS - NO DANGEROUS BENDS.

DROPPER KNOT - ALWAYS PLACE ABOVE A LEADER KNOT.

FIGURE EIGHT KNOT.

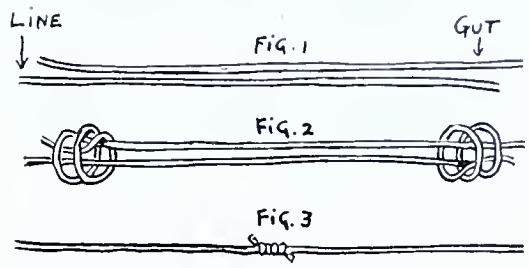
E.L.KING

produced artificially. American fishermen will likely have a better opinion of it two, three or five years hence. Emphatically, fishermen owe it to themselves to continue the experiment with a view to ultimate development; independency from European lack of dependency would be a Godsend to Yankee Isaac Waltonians. But for the time being, at least, this writer suspects many Pennsylvania fishermen, especially those approaching middle age and older, the fellows who have used Spanish gut for years and are reconciled to the uncertainties in quality and availability, probably still feel themselves enslaved to that hungry little worm eating its way to eventual doom far away in the land of the Don.

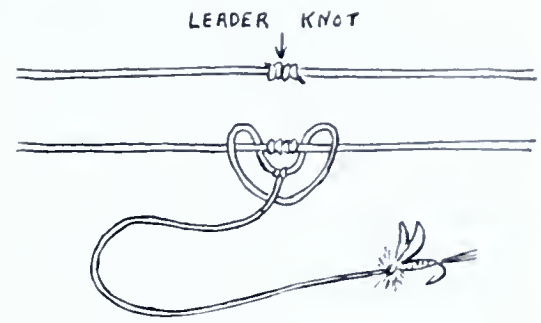
For the fellow who has used the new material and likes it, for the man who has tried and is still doubtful and for he who is thinking of giving it a whirl, I say go ahead—you'll lay just as nice a fly, have a stronger leader and probably catch as many fish. Furthermore this fisherman has been told the material coming on the market for the present season is in many respects superior to that which we knew last year. We can not all stand still—some must forge ahead, pioneer and explore the unknown—then as ever when the ultimate is achieved the remainder will follow along and share the reward.

While your correspondent has a slight personal preference for Spanish silkworm gut for dry fly, nymph and streamer work and the remainder of this article is to be devoted to that material, still his saddest leader experience occurred with a select and expensive bit of it. Eventualities do occur; a bad strand or two will crop up at times amid the most carefully inspected and costly lot. I lost the biggest trout ever my fortune to hook because of a 2x leader point that fibred out or spread away in shreads, the big, lunking old brownie that some fellows knew and called "Pappy" at Letort Springs near Carlisle several years ago. I knew the stump under which he lived and watched his ugly old snout in glassy clear water many the time. Finally and wholly unexpected one July 4th evening after the shades of night had settled over the water, this dub tangled with the old boy. The battle was royal, stubborn and one-sided—I played and coaxed him amid the watercress, he thundered and churned the not more than eighteen inches of water into a foaming maelstrom. Fearing each minute for the leader, I did not dare attempt to drag him in. Finally, he broke away and whisked back beneath the stump; the leader had parted not in a clear break, but in shredded, ragged, mushy pull, a separation of the fibres. Perhaps owing to the watercress and the limited space for a big fish to run, the separation may have been excusable; certainly the next time the leader and the fisherman were both to blame. Next Sunday just as the sun was warming up the stump, I crept up again, this time armed with a nine foot bass action rod and a leader tapered only to Refina. Again he was a sucker for a dry fly; with bass rod and heavy leader, I tried brawn, brute force. It just couldn't be done—he broke the leader clean this time. And the rascal is still there.

It is the writer's opinion the leader is one of the most thoroughly misunderstood and vitally important articles in the flyman's kit. To me it is a thing alive, vibrant, pulsating.



BARREL KNOT – EXCELLENT TO ATTACH UNLOOPED GUT DIRECT TO LINE. FAVORITE WITH PLUG CASTERS.



TO ATTACH SNELLED FLY TO LEADER AS DROPPER.

E.L. King

No part of the assembly is more carefully husbanded and nursed. No part is more carefully chosen when replacements are in order. No part receives more painstaking attention on the stream. No part is given more care and inspection when day is done and tools are being laid aside for the next time.

Casual observation leads one to suspect many fishermen might perhaps be a bit more successful with a little added leader consciousness. How many fishermen practically impoverish themselves in buying expensive rods, waders, reels, lines, flies and then step into a favorite stream with any old makeshift idea of a leader? And mark you, no matter how selective the remainder of the outfit may be, if the leader is poor quality or badly chosen, best results are beyond the realms of probability.

First requisites in selecting a leader are strength, tapering, springiness and a certain degree of invisibility. Of strength, little need be said—it just isn't possible to have too much and a more fluent opinion might well be obtained from some acquaintance who has lost a nice fish or two due to shoddy cheap material. Under no circumstances does the writer decry invisibility, but he has placed that quality last purposely. The primary idea of a leader is as a medium to get the fly out over the water in the most natural manner possible—*with a detached lifelike look.* Here is where wiriness and tapering are important. The rod first imparts energy to the line, which in turn transfers the action to the springy leader, shooting the fly out straight ahead and dropping it lightly, even with a wavering flutter, to the stream (not always for me).

Just how much tinting or staining may have to do with invisibility in the most common sense of the term is perhaps a strongly debatable point and no human can say positively what a leader looks like to the fish—to do so one would likely have to be a fish. Certainly where conditions warrant; where there are peculiar water discolorations or extraordinary local background resulting from vegetation or bank formation it does not harm to imitate nature as nearly as possible. Generally speaking, however, natural or mist gut is satisfactory for use in most water. Purely from personal experience the writer is inclined to minimize indiscriminate human attempts at tinting or camouflage by staining. Invisibility or presentation so as not to scare the fish is partly the responsibility of the fisherman himself—something he should not always expect to buy for mere money in a tackle store. Let the fish first notice the fly alighting naturally, and not leader slap or shadow, and chances are a hundred to one he will follow through with the strike and disregard such a trivial disturbance as the semi-transparent thread entirely. Once upon a time an amusing interlude was related to me by a prominent Harrisburg angler; fishing at Newville's Big Spring some years ago, the trout struck repeatedly at the knots on his tapered leader, all the while ignoring the fly entirely. And they say trout are leader shy at Big Spring!

In discussing invisibility, I do not wish to confuse the ordinary interpretation of that quality with flash. Flash should be overcome at all cost—be it necessary to stain, mud or scour the leader. While it may prove a bit bothersome, the less costly natural gut leader may be made safe with a little patience and care—and ordinary mud oft and diligently applied.

In dry fly work shadows seem vitally important; a natural, a mist, a green or a brown leader all cast a shadow. I wonder how many fishermen permit the line and leader to float idly past on a clear day to check on shadows—those who never make this experiment have a surprise in store. Shadows spell danger and death to fish; vicious, hungry enemies strike from above. The average line floating on the surface in clear water, say to the depth of two feet, will throw a shadow to the thickness of a lead pencil, often a man's first finger; the leader only a little less if also riding the top. On a bright clear day in order to overcome shadows as much as possible and to secure probable highest degree of invisibility, the entire leader should be submerged. In duller weather or not too clear water, the first two joints nearest to the fly are usually sufficient. Successfully sinking the leader on all occasions is an obstacle this fisherman has never solved to his entire satisfaction. True I do not relish changing and dressing flies, nor whipping them dry, but leader sinking is a nightmare compared to all that. Having tried about everything, fluids, salves and paste, I always come back to pumice and glycerine. Next in line is a mixture of gold dust and glycerine.

While on the subject of leader dope, there is another oft repeated formula it might be well to mention again. Just about the most effective manner to keep leaders ready for instant use and to preserve the gut is to immerse them in a solution of one part glycerine, four ounces distilled water and one-quarter teaspoonful of baking soda. My leaders are always carried thus in the car from April 15th until November 30th. A glass vessel with a suitable lid is necessary,

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A Successful Hair Fly and Some Gossip About Tying Materials

By Wm. R. Walton

A very wise man who surely knew life at its full excellence has said:

> "No man in this world can be happy without a hobby. Indeed for diverting our minds from the little crosses that we all have to bear, there is no earthly solace so healing as a subject in which we are intensely interested—something to which the thoughts may at any moment recur when weary of the suggestions we would escape".

Expressed in the Runyonian vernacular "This guy said a mouthful".

Every true angler will sense the undying truth of this bit of philosophy, but the author of it might well have continued by asserting that the possession of two or more hobbies is far better than the continual riding of one. Thus, when at the end of the inland fishing season, we northerners reluctantly consign the favorite rod to its place of hibernation for the winter, life may become a dreary grind unless we possess another hobby of consuming interest to which we can turn to fill the aching void.

For the fortunate man whose principal hobby is fishing, particularly if he be moderately nimble fingered, fly tying or if you choose, lure butchering, offers gratifying means of assuaging the fishing urge.

Any man who has once had the experience of tying a fly or concocting a lure upon which he then has taken a good fish, will never forget the thrill thus produced. If he is not thus rendered an habitue of the fly tying vise, he would better give up fishing as he has not the makings of a real angler.

Now by "fly" I do not necessarily mean a hifalutin, fan-winged dry fly, light and delicate as a gnat's eyebrow and by the same token, just about as perishable, but any old bunch of feathers, hair, wool, tinsel or this and that, tied firmly on a hook and that serves to attract and land a fish. If you have not tried it, you'd be surprised how effective even a roughly tied fly can really be when properly presented.

Volumes have been written to prove that the vision of game fishes is shockingly defective as compared with that of the warm-blooded animals. It is asserted for instance, that on account of the almost globular convexity of its crystaline lens and consequent short focus, the eye of a fish is as hopelessly near sighted as that of the familiar 4-eyed Japanese student. This does seem plausible when we consider the weird and unearthly lures upon which fish are sometimes caught. But if such fish as the black basses and trout are really so very myopic, will some learned person please explain why such a fish will, not seldom, emerge from a hideout on the edge of a pool and dart unerringly for 25 to 30 feet and obligeingly hang himself on one's fly?

Basing their arguments on the alleged near sightedness of this fish, some experienced anglers have argued that one pattern of fly is as good as another providing the angler has sufficient faith in it, and that size, rather than pattern, is the important thing.

The original apostle of simplicity in fly patterns seems to have been the British expert angler and writer, H. Cholmondeley-Pennell, who flourished in the seventies and for whom the Pennell hook is named. [1] He contended that only 3 similar patterns of flies, viz; green, brown and yellow hackles, in different sizes, little ones for small waters and greater ones for big puddles, were all sufficient in angling for brown trout and grayling under British conditions.

The writer with a splendid catch of hefty trout.

He states that "general shape, general color and size are all that can be distinguished by the fish". Furthermore, he claimed to have proved this conclusively by years of angling while pitted against skilled antagonists who used their favorite flies in local waters.

In construction, Mr. Pennell's flies were simplicity simplified as they consisted in nothing more than a single hackle tied dry and with the tip of the hackle brought to the hook bend to form a tail. The body was made of ordinary sewing silk and their appearance when finished is shown in Figure 1.

Not many American anglers would be content with this meagre assortment of flies. However, it should be remembered that Mr. Pennell was confining his fishing to what in this country would be considered a very restricted geographic area and to one species of trout and one of grayling. In view of the wide variety of fishing available to the American angler it is not to be expected that Mr. Pennell would have had equal success with his stingy assortment here. Nevertheless, it very likely would not harm the gentle ar in the least if half of the existing pattern of trout flies were consigned to the incinerator and forgotten. Of course, one could no expect the manufacturers and tackle merchants to agree to this postulate! Notice that I said "trout flies" with malice aforethought because I do not accept any such destructive theory as regards bass lures.

One of Mr. Pennell's further arguments in favor of his simple flies was the fact that he could tie such a fly in the astonishingly short period of 45 seconds! Well, who in tunket (except perhaps some avaricious commercial tyer) wants to ruin his nerves and spoil his fun by tying flies at such furious and unheard of speed as that? One who adopts fly tying not for profit but as a pleasure giving hobby will do well to proceed with calm deliberation and extract from his work that enjoyment which is the chief reward of an agreeable avocation. To such persons the following remarks are directed.

The furnishing of material for fly tying has become a highly commercialized specialty in this country, as the beginner will discover from his attempts to purchase materials of good quality. Unfortunately, much of the stuff sold does not meet these specifications. Lack of definite standards for hackles and other materials no doubt is responsible for at least some of the shoddy material that is offered.

In the construction of the deservedly popular streamer fly no single material, in the writer's opinion, is more important or effective than the hair of various land animals used either in the natural state or dyed in various hues.

I believe that for this purpose hair is not only more effective than cocks' hackles but when properly tied, with plenty of celluloid cement judiciously applied, is about the most durable material obtainable.

However, the tensile strength and texture of hair from different animals vary greatly. Deer hair (all of the deer family) although widely used on streamers is low in tensile strength and is easily bitten off by short-striking fish. This hair is particularly useful for the construction of floating flies and bugs because of the air cells it contains but for streamer flies hair possessing stronger qualities is preferable. Deer hair is, however, much too coarse and stiff to produce the life-like action given by hair of finer texture particularly in flies of medium and small size.

Among the kinds of hair actually tested by the writer were polar and black bears, "impali" or "impale" tail (very likely calf tail in disguise), skunk, jackal, Virginia deer, reindeer, moose, opossum, squirrel and last but not least "ring-tailed cat" or cacomistle.

Polar bear hair is among the most expensive of those mentioned and has a glassy sheen and hard texture. However, the basal

[1]. The Modern Practical Angler, Fredk. Warne & Co., London, 1870.

third of it is crinkly and irregular which makes it difficult to assemble and tie neatly. Black bear hair is even more shaggy and irregular with none of the attractive qualities of the former.

The impali hair makes a very acceptable substitute for that of the polar bear and is much cheaper. The chief fault of the former is that some of the tails have a permanent wave that renders them undesirable for streamer purposes as the hair cannot be straightened. The straight ones are excellent, however, especially for the larger hair minnows. These tails are available dyed in all of the standard colors at very little advance in price.

The texture of skunk hair is fine and it is straight and easy to tie but quickly becomes water soaked and lacks natural gloss. Opossum hair is even worse in these respects, and most of it is not long enough to be useful for streamers.

Jackal tails are about 14 inches long and resemble in shape those of the fox. However, the tip hair is glossy black and a streak of black-tipped hair runs down the entire tail. This hair is barred with white like that of the badger and makes handsome barred wings for hair flies. The remainder of the tail is reddish and much of it is fluffy and soft. It seems unnecessary to say much about squirrel hair as nearly all anglers are acquainted with its good qualities. Its only serious faults are the absence of pure black and white hair and the fact that its limited length forbids its use for the very large streamers and hair minnows.

Some time ago while browsing through the catalog of a dealer who carries a wide variety of hair and feathers in stock, I spied the following intriguing statement:

"Monga ring-tails; Every manufacturer uses this tail on streamers and hair flies. There is no hair better than that found on these tails which are from 12 to 14 inches long. The hair is from 1½ to 2 inches long and the tail is barred alternating bands of white and black about 2 inches wide, running around it. The hair is absolutely waterproof and has an irresistable action in the water". Well, I fell for this description and when the tails arrived found them much as represented. Being possessed of a huge bump of curiosity, I became annoyingly desirous of learning just what animal had lost these exotic looking caudal ornaments. At first I suspected that one of the squirrel-like phalangers had borne them but searches among the text books failed to indicate any such creature. However, a stroll through the mammal hall of the United States National Museum finally solved the problem. In a case containing native American animals I saw a small sharp snouted creature that looked like a cross between a weasel and a raccoon but with the identical tail attached to its stern post. Its label read: "*Bassariscus astutas flavus* Rhodes, New Mexico". This identification was presently confirmed by a visit to Mr. Gerritt S. Miller, Curator of Mammals, who said that the dealers' name "monga ring-tail" was a new one to him.

Regarding this little beast, Mr. Vernon Bailey of the *U. S. Biological Survey* says: ([2]) "The beautiful little cacomistle has a face of a fox, the body of a buffy-gray marten and a long bushy tail with a black tip and about 7 black and 7 white bars or rings. * * * These bright faced little animals are nocturnal in habit and rarely seen except when they are caught in traps or occasionally come into cabins or camps. * * * It seems to be a common practice of the miners to catch and tame these animals and keep them in their cabins as protection against rats and mice. The fur of the cacomistle is lax and soft and of no great beauty or value. The skins are usually saved by the trappers but bring an insignificant price". This is evident from the price asked by the dealers in tying supplies which was only 10 cents each for the best tails!

Among the vulgar names often given this animal are civet cat, bassaris, ring-tail cat and the Mexican name cacomistle preferred by Bailey.

Under their trade name these tails are obtainable both in natural color and with their white portions dyed all standard hues. Most of the hair is about 2 inches long, medium fine in texture, quite glossy and most readily tied. Like nearly all animal hair it is intermingled at its base with fine wooly undercoat which must be removed before tying on streamers. This is easily accomplished by holding a bunch of the hair by its tips and simply combing the fine stuff out with a fine-tooth comb or "catcher" as the darkies call it. A good way of cutting out the required bunch is to fix a safety razor blade in a clamp or vise, thus affording the operator the use of both hands. The base of the hair is then brought into contact with the blade which can be made to cut very close to the hide in this way.

The white hair in this tail is nearly colorless, opaque, and in some tails the extreme tips may be faintly tinged with brown but others are pure white.

The so-called black hair, as is the case with practically all natural hair and feathers, is not a true black but a very dusky brown. Even the feathers of a crow are not as black for instance, as the hackles of a cock dyed black, and there is no such thing as a really black natural hackle! However, the dark hair of the cacomistle is so nearly black as to serve excellently in contrast with the white hair from the same tail.

In order to give this hair a practical test, streamer flies of both bass and large trout size were tied. That designed for offering to the bass is illustrated herewith in figures 2, 3, and 4. As this is intended for use with a spinner it is tied on a number 1, model perfect, ringed eye hook, which is the largest size I ever employ even for largemouth.

In constructing this cacomistle fly which I had dubbed the "monga prince" before learning its derivation, the body and tail consist of a single bunch of black hair taken from

[2]. Mammals of New Mexico, N. American Fauna No. 53. U. S. Biol. Survy.; Dept. of Agric. Wash., D. C., Dec. 1931.

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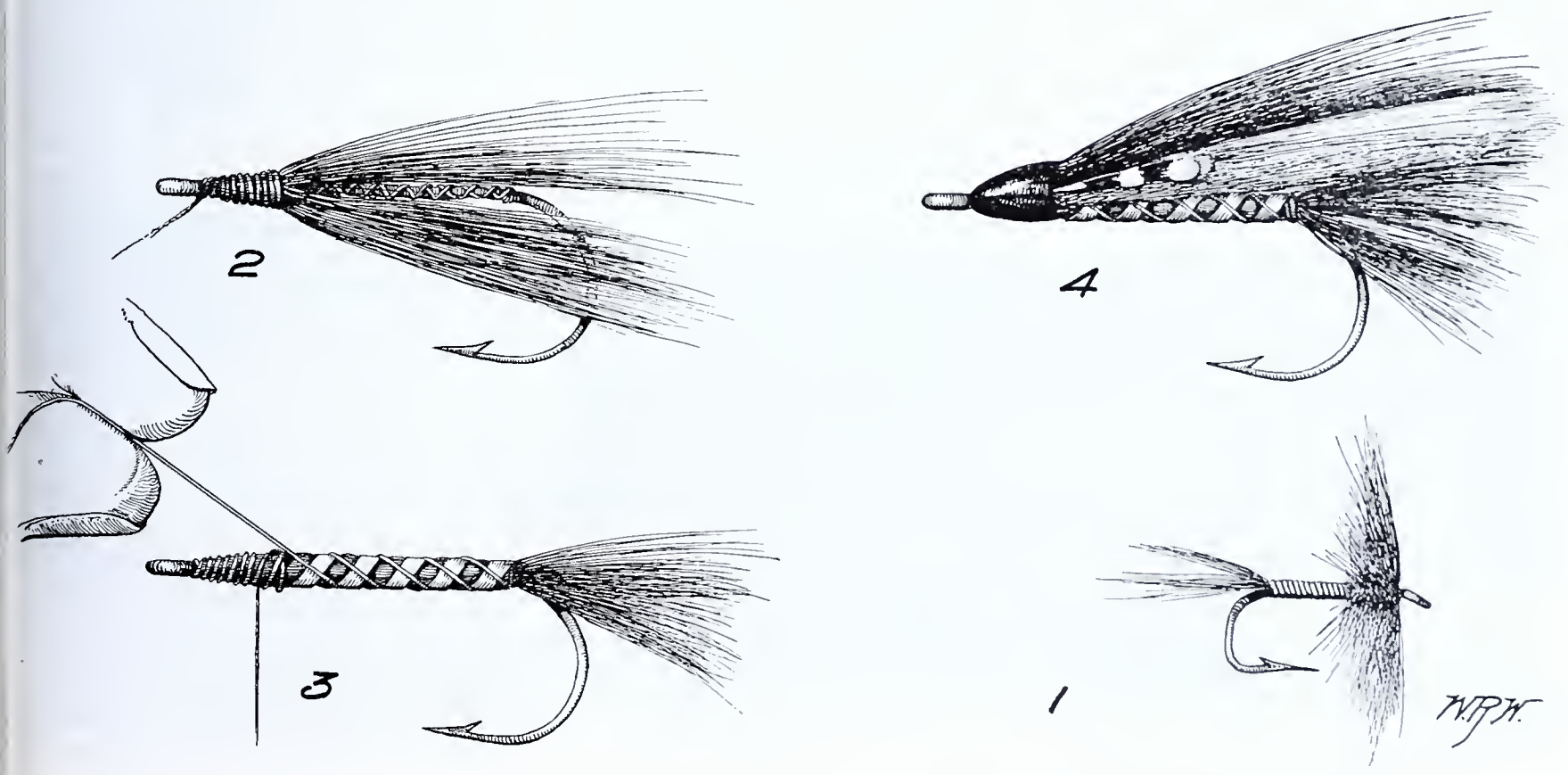

OUR TROUT

A Discussion of Pennsylvania's Three Popular Species

By ALEX P. SWEIGART

THE wrist grows itchy, the eyes gaze into far spaces, picturing brawling white water, and for thousands of trout fishermen, restlessness is the keyword. Trout time approaches, bringing with it perhaps the most colorful sport of the angler's year, days astream on mountain waters, cutting their noisy way between dark masses of rhododendren, on meadow brooks with their quiet countryside setting, and on heavier waters, every dark swirl and pool of which conjures up visions of giant brown or rainbow trout rising from the depths. To this quality, this atmosphere, if you care to call it that, may be attributed in good measure the steadily increasing popularity of trouting as peerless outdoor sport. Naturally, on the eve of another trout season, our cold water gamesters, brook trout, brown trout and rainbow trout are the central topic of conversation wherever fishermen gather.

Although trout fishing here in the densely populated East is admittedly a sport dependent in major part on the output of legal size fish by the hatcheries, certain of our larger waters are capable of carrying and do carry over from year to year a stock of trout from which record fish are taken. In this connection we might mention the Brokenstraw in Northwestern Pennsylvania, Bald Eagle, Penn's and Spring Creeks in Centre County, and Fishing Creek in Clinton County. Notably these streams are producers of giant brown trout with occasional rainbows in top-ranking weight brackets entering the picture.

Perhaps it's just maudlin sentiment linked inevitably with those boyhood days when, equipped with a cut pole and a tobacco tin of worms, we invaded its mountain retreats, that causes us to consider first in this discussion—

The Charr or Brook Trout

In vivid beauty, this native Pennsylvanian has long been regarded as second only to the now extinct Michigan grayling. From the rich dark marbling of black or grayish and green on its back and dorsal fin to the frequent crimson dash extending from base of gills along the upper surface of the belly to the vent, it is a superbly molded fish. Usually, the female adult charr will be found to have a smaller and more blunt head than the male. The latter, when it achieves a length of 15 or 16 inches, very often has much longer and more pronounced jaws. Red spots occurring along the sides of the charr frequently are tinged pale bluish on the borders. It has tiny scales, the smallest of any of our Pennsylvania game fishes. The tail fin in adults is square and the pectoral, ventral and anal fins are very often orange or reddish, accentuated by the white rays on the outer edges. The girth of the brook trout seems to be determined chiefly by the type of waters in which it occurs. Where food is abundant, as in small, limestone fed meadow streams, adult charr generally develop heavy girth at maturity; in fast mountain streams, having a somewhat limited supply of forage, they usually are much more slender. Perhaps another factor having a great deal to do with girth development is the speed of the current in waters where they occur.

Changing conditions on trout stream watersheds in Pennsylvania during the past 50 years have gradually reduced the number of streams suitable for this splendid game fish. Erosion and the tendency of many streams to rise to higher temperatures during the summer months may be mentioned as contributing factors. Our mountain brooks and deep banked smaller meadow streams, fed by limestone springs, would appear to be, at this writing, the last strongholds of the native.

When it comes to gameness, and we are inclined to view this quality from the standpoint of surging, resourceful tactics when hooked, we nominate the brook trout for the top of the cold water list. True, it has rarely, if ever, broken water for us, but the canniness with which it has taken advantage of every possible underwater refuge, such as sunken roots and brush, the startling swiftness of its underwater lunges and tendency to fight to the last gasp has won for it enduring respect.

Brook trout.

While the brookie is an inveterate surface feeder when fly hatches appear, its foraging during the open season (in Pennsylvania, from April 15 to July 31) might well be considered. Usually, at the start of the season, streams are high and water temperatures comparatively low. Then it is that earthworms washed from stream banks constitute an important part of its diet. By the beginning of May, as a rule, the first early season hatches of flies make their appearance and from then until the middle of May, wet flies, nymphs and streamers, as well as minnows and crickets rank as excellent bets in taking his highness, the charr. Late May and June constitute the heyday of the season for the dry fly, and in July, when low water prevails in many streams, the angler who likes to fish a 12 foot leader, tapered to 4x or 5x and dry flies ranging in sizes from 16 to 20, can find plenty of sport.

Generally, we believe the brook trout to be somewhat less selective when it comes to striking the fly than is its imported competitor, the brown, and are inclined to rank the rainbow between the two in this respect. All three are gallant fly fish of the first water.

Linked vitally to the welfare of the brook trout is shore cover as well as underwater cover. It is by instinct a shy fish, a retiring fish, and ideal conditions for its existence seem to prevail in waters having either heavy growth of shore cover or deep, undercut banks. In shaded stream sections of brooks carrying consistently low summer water temperatures, the brookie seems to revel. Conversely, we have found that open sections of such streams carried few brook trout.

It is to be recalled, not only in the instance of brook trout but as regards the other two species, that year round activity is the rule.

Rainbow trout.

When extremely low winter water temperatures prevail, feeding is naturally not heavy with trout in streams affected although some food is taken; however, in limestone spring streams varying slightly in temperature throughout the year, the winter foraging activity of the fish is correspondingly heavier. There is an inclination to rank types of forage vital to trout welfare under the following heads: (1) crustaceans, such as the crayfish, the scud or freshwater shrimp and the sowbug; (2) nymphal and adult forms of insects such as the stone fly and green drake; (3) other fish, such as the blacknosed dace and (4) terrestrial forage, such as the earthworm, the cricket and the grasshopper, washed into or accidentally falling into the stream.

The Rainbow

Dynamic is the word for this black spotted gamester with the vivid stripe, a mingling of pale blue and rose defying description. Firmly knitted, heavy of girth and having a small, shapely head, it epitomizes the cream of the Pennsylvania trout crop for fly fishermen.

How many of us can recall, for instance, that day last season when, standing in a turbulent stretch of water, we cocked a dry fly lightly to the fringe of white water accentuated by outcropping giant boulders? Remember that silvery flash in the rapids, the impact of the strike that threw a trembling violent arch into the light bamboo, and then, wonder of wonders, those maddened lunges from the surface, until a count seemed almost hopeless? Certainly for the fisherman who has taken a two pound rainbow in fast water, a moment of reverence must come in recalling its gallant fight.

And now to draw a line of comparison between this magnificent fish from the Pacific slope and our own charr in fighting qualities. Granted that the rainbow is a leapin' fool in any fisherman's language, it has always appeared to us that the smashing, terrific fight this fish puts up in the first few minutes it is on the hook tends to sap its vitality rapidly, so that in the ebbing moments it is fairly spent, whereas the charr, with its cunning underwater battle, ever attempting to take advantage of any break that a sunken snag may offer, outfights its rival in the waning seconds of battle.

Brown trout.

Introduction of the rainbow to Pennsylvania was first attempted in the '70's and these early attempts were then regarded by the Fish Commission as failures. Native to the snowfed streams of the Sierras, it was thought at that time that it could be introduced to many of our larger warm water streams with success. So strong was this belief that some rainbows were stocked in the Susquehanna River. In recent years, rainbow stocking with legal size fish conducted by the Board has proved a great deal more effective so that today creels taken by our trouters are very often generously sprinkled with this species.

That the rainbow trout has definite migratory tendencies after reaching an age of from three to five years seems to be a fairly well established fact. Planting with fingerling rainbows in Elk Creek, Centre County, a number of years ago resulted in excellent fishing in that stream during the next two seasons. Old timers of Milheim, located on this stream, can tell you that about the third year after this planting the rainbows seemed to vanish. It would appear that streams having deep reservoirs in their course are excellent bets for this species. One of our streams that has yielded rainbow trout in the record class during recent years is Evitts Creek in Bedford County, and on it is deep Lake Koon, ideal wintering quarters for rainbows.

A spring spawner in its native environment, this trout has radically changed its spawning time since introduction to Pennsylvania. Brood rainbows held at the Bellefonte hatchery now may spawn at any time during a prolonged period extending from October to January or even later.

This persistent surface feeder fits nicely into the picture of present day Pennsylvania trouting.

The Brown Trout

Facing hard facts, there seems to be increasing evidence that the brown trout of Europe, *Salmo fario*, is a fish particularly adapted to our hard fished Pennsylvania waters. A moody feeder, unaccountable as to times when its rises may occur, it today is predominant in many of our streams that are fished most intensively.

Tending to vary somewhat in coloration in different waters, the body color of the brown trout may range from light golden brown to brownish black. Its head, body, dorsal fin and adipose fin, the fleshy projection on the back behind the dorsal fin, are marked by numerous black and red spots. Occasionally the black spots are x-shaped and have pale borders. Adult brown trout, particularly the females, usually are of stout body formation. The head is large, jaws powerful and well formed with the upper jaw extending to the rear margin of the eye. On the vomer or front part of the roof of the mouth, triangular in shape, are a series of teeth running crosswise, while on the shafts of the bone are two alternating series of strong teeth. The pectoral, ventral and anal fins are usually yellowish in color.

In game qualities, this fish certainly leaves little to be desired. It is capable of a strong underwater battle, is resourceful in taking advantage of underwater cover, and frequently is a bold leaper in its efforts to shake the hook. To a greater extent than either the brook or the rainbow, this fish is a persistent feeder on minnows and other forage fishes. It is to be noted in this connection that each year many brown trout over the 20 inch mark are taken on the "minnow on a wire" combination, fished behind a swivel and with a double hook, by veteran trout fishermen.

The brownie, after achieving a length of 18 inches or over, is very often an inveterate

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Typical of waters in which the native charr is making its stand is this picturesque stream in Tioga County.

"BROOKIES"

By N. R. CASILLO

NEARLY all fishermen are prone to more dearly cherish the memories of their largest or most valiant fish. And that is as it should be, for when a battler or record breaker is landed, that day becomes emblazoned in bold, red letters and not likely to be soon forgotten.

However, upon occasions I have reflectively dwelled on some of the big fish that I have caught and found that time has a way of befogging events so that practically all such incidents excepting the most recent, have been relegated to a rather hazy and indefinite past. Possibly that is one of the reasons why a fish in an angler's story grows progressively larger.

I have never caught a really large brook trout, yet, any and all of my sallies after this favorite stand out in startling bold relief. In retrospect every brookie that I have ever caught causes a literal cascade of memories to come tumbling into my pool of daydreams.

For example, my first brook trout of the season always brings to mind a stream of my boyhood; a tiny mountain brooklet inappropriately named the Hurrican, that tumbled through the pine clad hills and lush mountain meadows of my native state. A brook so small and intimate that it became at once friendly and close, frankly brawling or whispering its secrets. I never tired of its plaintive song as it briefly flowed through the winding mazes of the intervales. Miniature cascades, rapids and riffles were but the ever changing cadences of its voice. Do you wonder that the brookie, as I like to call it, is the fish that I hold most dear?

A couple of years ago a fishing intimate casually spoke of a stream that he had heard of that was reputed to contain wild trout.

I immediately pricked up my ears. "Wild trout?" I asked. "What do you mean, wild trout?"

"This crick has some honest-to-goodness wild trout in it," he replied.

"You still haven't answered my question. Most trout are wild, and how," I needlessly reminded him.

"What I mean is that these fish are natives, hatched and reared in the stream. Not hatchery trout mind you, but genuine wild trout," he emphasized.

"Well, come on, out with it."

He grinned expansively. "I thought that would get a rise out of you," he teased.

"Oh, go on," I impatiently urged.

"It's up around where we hunt in Forest County, between Marienville and Kelletville." He paused to search my face for signs of enlightenment. Failing to find any, he continued. "Well, just beyond the point where the road crosses Big Salmon, you turn left and follow a pipe line back in for a couple of miles or until you reach a gas booster station. I was told that it's good fishing from that point on to where it runs into Big Salmon."

"It may be the Little Salmon," I hazarded. "The two come together up in there somewhere."

"I don't know about that, but I was told that there are plenty of trout in it and mighty few fishermen."

A week or two before the opening of the season we obtained a map and managed to segregate what we thought was the stream indicated. It was unnamed on the map.

Chet Bauder (the informant), and I had traversed most of the country up in there and knew it to be plenty wild. In fact, one fall we got thoroughly lost while roaming through it. Most of the topographical features of the landscape on that memorable occasion went unnoticed, but we did recall encountering several small streams, any of which might have been the one in question.

On the opening day we left Marienville at sunrise and promptly came to grief in a quagmire on the road just outside of town.

After getting fished out we proceeded cautiously, finally reaching Big Salmon Creek without further mishap. From then on it was catch as catch can. The road was covered with slithery mud and practically impossible to negotiate. So we parked the car at the foot of the hill handy to the bridge and went on afoot.

The trail back in was a vast improvement over the road, and in due time we reached the booster station. The stream, a tiny rivulet indeed, trickled under an ancient foot bridge and then disappeared into a chaotic growth of matted grass and bushes.

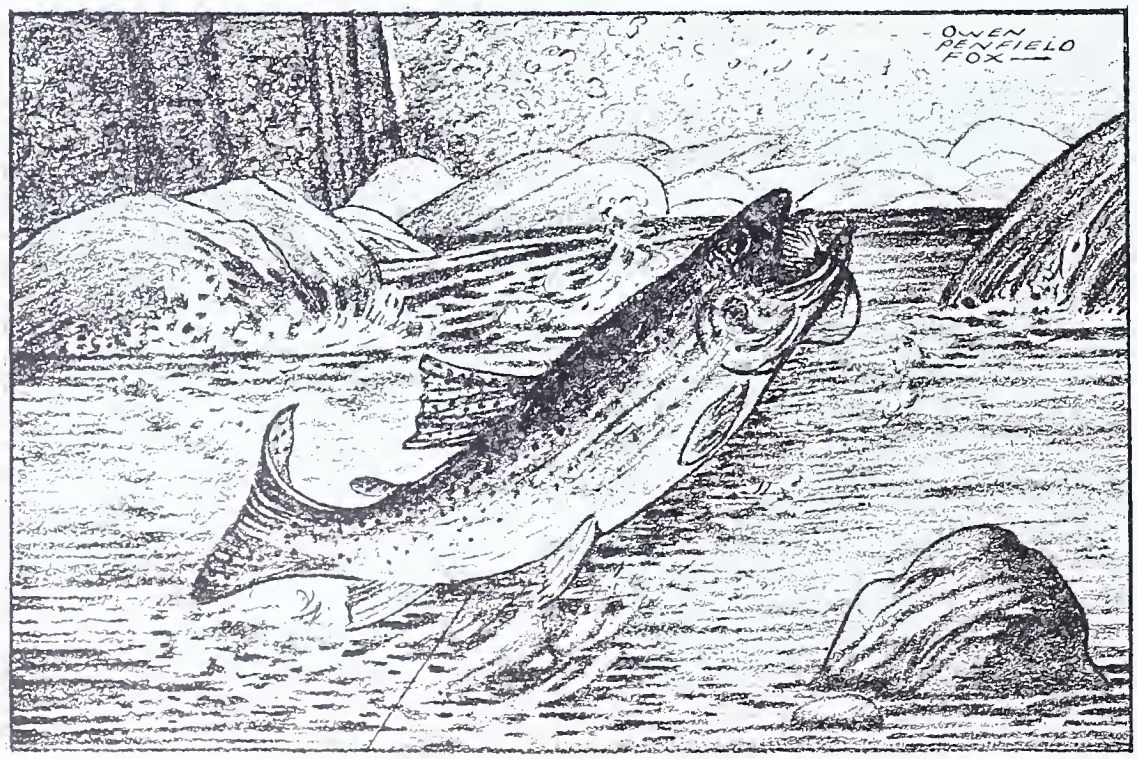
A couple of hundred feet below the bridge the brook reappeared, having undergone a remarkable transformation in the meanwhile. At the point of exit the water literally boiled out through masses of submerged brush and debris. What had been a brooklet was now a fine trout stream; its water clear and inviting and cold as an ice cream soda. What had taken place was only short of magic. However, my guess was that there are some whopping big springs located there which force-feed the infant.

The water was fast so we decided to fish down. After drawing lots it befell me to lead the way, so I left Chet and went on for nearly half a mile before starting to fish.

At a turn in the stream, where the swift current chewed into a bulwark of beech roots, I floated an artificial nymph, a chenille creation that looked like a section of pipe cleaner. For a yard or two it submitted to the vagaries of the current and then it disappeared. There was no splash or any other indication that a fish had taken my offering, so I did not strike. The first intimation I had of a hooked fish was when the tip of my wispy rod suddenly and forcibly dipped downward. It was a delightful surprise.

That it was a brook trout was without question. What other fish could have breasted the smart current of that tumultuous mountain brook and taken the lure without so much as a telltale splash?

With the remarkable resources of its kind it took advantage of its environment, making good practical use of every root and rock-bound cranny. Its last rush carried it down among a swelter of beech roots under the overhanging bank. But, before it had a chance to foul the line, the spring of the rod drew it out into the open. After a couple more brief and futile flurries I netted it. It was a small fish, about eight inches long, that I could have forcibly dragged from its element without virtue of net. What more ignominious finish could be designed for the



pride of the rills" than to haul it from its beloved stream dangling at the end of a line?

Did you ever notice the rich coloring of a freshly landed brookie? No wider range of coloration is enjoyed by any fish; the somber blue-blacks of its vermiculations shading artfully into the pinks and creamy whites of the underparts. In no creature are so many contrasting colors so beautifully and tastefully blended.

As I held the fish in my hand its colors seemed to ebb and flow with every changing light, emphasizing a form designed for cleaving swift waters. Cold as icicle and yet flaming with vitality I mercifully despatched the brookie and creeled it.

A little farther down the stream again turned, at the same time abruptly changing its pace with a series of chutes and cascades that finally culminated into as handsome a pool as you would desire. Hemlocks dipping gracefully from the high bank seemingly gathered the blue-green jewel to their bosoms.

Widely skirting the pool so as not to frighten any possible denizens, I carefully made my way to its tail. There I bent a small black gnat to my leader. It was the only artificial in my possession that even remotely resembled the insects dancing about near the surface in small, loose clouds. Midges was my guess.

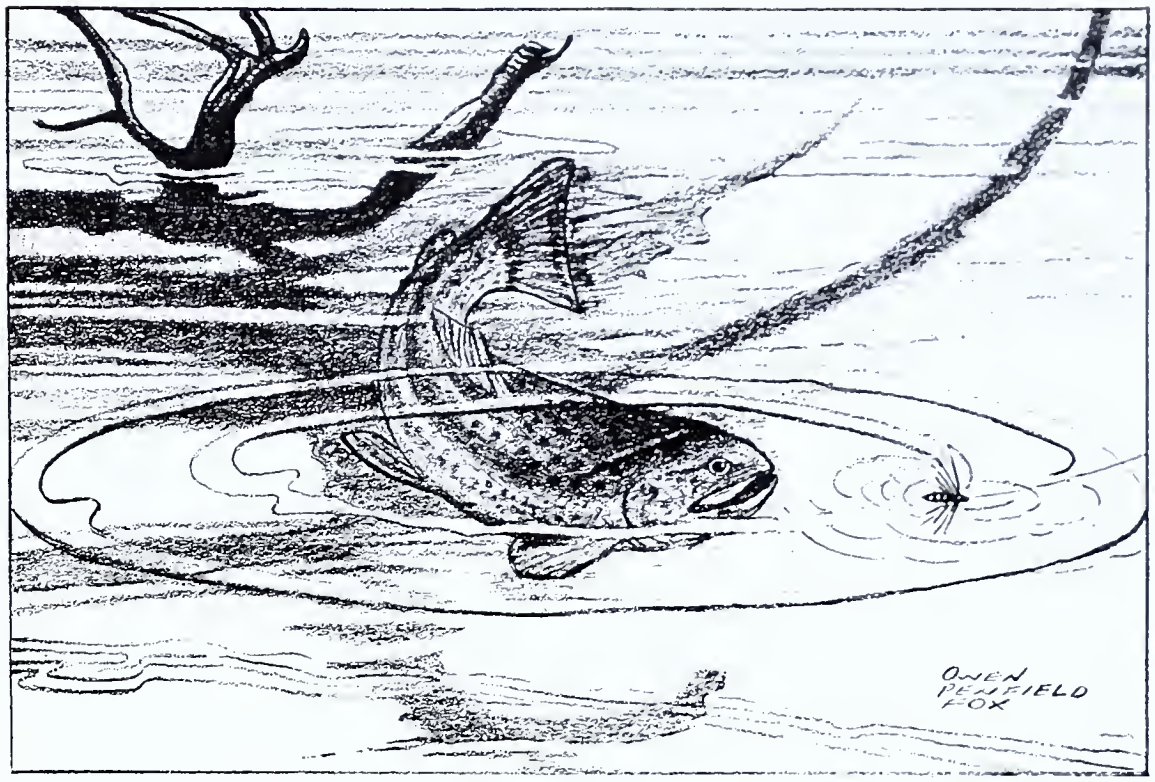
Frequently I have seen numerous natural insects tempting fate by poising over the water or even skating on its surface, causing me to wonder if it would not be an idle and fruitless gesture to offer the fish a bunch of steel and feathers when they were turning up their noses at the real thing. Brother that's when you should give them the works.

On occasions I have seen pools where literally thousands of May flies were fluttering their dance of death with nary a trout rising to the rich fare. I have learned from experience that that is frequently the time when the fish will take a fly differing from the natural insects in hatch at the time. Whether it is the motion imparted to the fly or its unusual appearance that turns the trick I can't say. All I know is that it often works.

This observation has convinced me that even under ordinary conditions trout need not be rising to take a pro-offered artificial. What you offer them may be just what they crave to sharpen jaded or blunted appetites. I and doubtlessly you, have seen a trout with a partially digested minnow protruding from its mouth take a fly. That particular imitation may have looked like the natural insect they needed to ease the minnow down a bit more zestfully.

But to get back to fishing. I placed the black gnat at the edge of the rippled water near the head of the pool. A series of twitches on my part were quickly followed by a fervid tug and I was fast to another fish. This one briefly but stoutly splashed and fluttered on the surface before giving up the ghost. It was smaller than the first so I gently disengaged the hook and released it.

A cast into the shadows of the hemlocks netted another strike, the lightly hooked fish dropping off when partly clear of the water. But the brookie was game, immediately righting himself and striking again. This time he was on for keeps, another eight incher and a keeper.



Thus the morning passed, liesurely and enjoyably; the feeling of pure pleasure induced by the attractive surroundings adding immeasurably to the eight or nine brookies reposing in my creel.

After lunch while enjoying our pipes, Chet opened his creel and parted the mosses and ferns covering his catch. "You know," he mused as he gazed on the fish, "I don't believe that there's another fish that fits its environment so well as a brookie."

"Yeah, I agree with you," I replied trying to shake off the comfortable drowsiness that was beginning to envolop me.

There followed a brief interval of silence while he knocked the moist heel from his sizzling pipe. Shortly before my complete surrender to Morpheus Chet's final philosophical sally penetrated my rapidly numbing consciousness. I did not recall it until a couple of months later. He said: "Mountain streams and brookies were made for each other. Brooks such as this one are the last strongholds of mountain-bred natives."

And now I am wondering just how long this will be.

PLAN BOOSTER NIGHT FOR APOLLO ANGLERS

The Apollo Community Sportsmen's Association held its annual election of officers in the Municipal building and stepped up its vice-president, Foster Branthoover, into the office of president for 1940. R. Clyde King, last year's president, was not a candidate for re-election, but had charge of the meeting until the new chairman was elected.

A large turnout of sportsmen attended the first meeting in the new year and re-elected W. F. Pauly, treasurer, and Frank R. Swast, Jr., secretary. W. F. Pauly was also elected delegate, and R. Clyde King, alternate to the County and Southwestern District Sportsmen's Associations.

A. G. Beighley was elected a director for a five-year term and N. B. Johnston for a three-year term. These were the only two vacancies on the Board of Directors. The other directors are: 4 years, E. A. Beck; 2 years, Albert Parsons; 1 year, Lyle Clawson.

The sportsmen, recalling the successful "booster" meeting they held last fall for the hunters, planned one for the fishermen, and set the date for Tuesday, April 9. On that night a complete fishing outfit of flyrod, automatic reel, line and boots will be awarded. Films on fishing and talks on the same subject will be given by noted speakers.

TO ALL CLUB OFFICERS

In order that the Board can cooperate efficiently with all clubs, it is necessary that notification be forwarded this office immediately on change of Secretary or President, giving new officer's name and complete address as well as former officer's name and address; also county in which club operates.

We are endeavoring at the present time to check our club officers file, and take this opportunity to thank all clubs who have already answered our inquiry, and hope for an early reply from the few who have neglected to do so.

SHARP HEADS NEWPORT CLUB

Paul W. Sharp, of Newport, was elected president of the Newport Sportsmen's Association at a meeting of the association held in the American Legion Home at Newport. Other officers elected are H. W. Wagner, vice-president; G. R. Young, secretary-treasurer.

John Loy, of Newport, was awarded a casting rod for catching the largest bass which measured seventeen and one-half inches. W. Park Knisely was given a casting reel for catching the largest walleye, twenty-four and one-half inches long, and Percy L. Beatty received a tackle box for catching the largest pickerel which measured nineteen inches.

NOTES ON FEDERATION MEETING

Editor's Note: To the present time, resolutions affecting the Fish Commission as adopted by the Federation in its February meeting are not available. These resolutions will be run in a future issue of the Angler.

INTERESTING discussions were heard and numerous important resolutions were adopted on Monday, February 12, by one of the largest delegations of sportsmen which ever attended an annual meeting of the Pennsylvania Federation of Sportsmen's Clubs.

Among the resolutions approved were those recommending a 50-cent increase in the fishing license fee to acquire and develop public fishing waters and a proposed expenditure of $100,000 from the Fish Fund to fight stream pollution.

The Federation reelected its three officers, namely, John C. Youngman, Williamsport, President; M. C. Merritts, Altoona, Vice-President; and Dr. C. A. Mortimer, Wilkes-Barre, Secretary-Treasurer.

Speakers and committee chairmen addressing the conference during the morning session included Miss Lois Clark, of the Department of Public Instruction, who outlined the need for conservation education, particularly in the elementary schools, and who said that her department is willing to work hand in hand with the sportsmen in helping to conduct such a worthwhile program.

Robert Steventon, Chairman of the Committee on Conservation Education, rendered a very excellent report on the efforts of that committee to stimulate interest in the subject. He, too, said that the Department of Public Instruction had offered to cooperate in the movement. A resolution of the committee recommended that a course in conservation education be inaugurated in all State Teachers' Colleges, and that the Department of Public Instruction be asked to appoint someone in that department to correlate the educational facilities of the various conservation agencies of the Commonwealth and to put the material furnished in proper form for the use of teachers.

Ross L. Leffler, President of the Game Commission, and C. A. French, Commissioner of Fisheries, each spoke briefly, thanking the Federation for its splendid cooperation last year and assuring the assembled sportsmen of the continued support of their respective departments.

S. V. Sedlak, President of the State Trappers Association, asked the Federation to support a five-point program recommended by his association, including among other things a special fur license, the revenue therefrom to be set aside in a specially earmarked fur fund to be used for properly managing fur-bearing animals. The program also calls for restriction in the payment of bounties to the season when furs are prime.

Hon. John M. Phillips, former President of the Game Commission, and Clyde King, of Apollo, gave an interesting account of the starling and the menace it has become to native song and insectivorous birds as a result of its increasing numbers.

Herbert Watts, Chairman of the Committee on the Pittman-Robertson Federal-Aid-in-Wildlife Program in Pennsylvania, outlined the programs now being carried on, and praised the cooperative research station at State College sponsored jointly by the Biological Survey, the Game Commission, and State College.

President Youngman read a report from a special committee concerning the registration of dogs, and M. C. Merritts, Vice-President and Chairman of the Administration Committee, submitted a proposed revision of the constitution and by-laws.

Intensive improvement, such as that shown, has been carried out on many trout streams in Lancaster County.

A SUCCESSFUL HAIR FLY

(Continued from Page 9)

tying silk is then spiralled back to the bend of the hook and returned to the eye. A coat the tip of the cacomistle tail, cemented and tied firmly to the shank back of the eye. The of cement is then given both shank and silk and the hair is then pulled taut with the left hand and tied down by winding the tying silk evenly over the body, spaced widely enough so the tinsel will cover the turns when applied later. The wide silver tinsel is then tied in and lastly a length of fine silver-colored wire is secured behind it. The tinsel adds both glitter and strength to the body and the fine wire which overwinds it adds further security against the tearing action of the teeth of the fish. The tinsel is wound forward first and secured, the fine wire being wound on top of it but in the opposite direction. (Fig. 3)

When the metal parts are tied off, a good coat of clear nitrate lacquer is applied to them as this will lengthen materially the period during which tarnish may be delayed. I say "delayed", because as yet there seems to be no really untarnishable tinsel obtainable although chrome plate should serve to solve this difficulty when the manufacturers wake up.

The body of the fly is now complete and ready to have its wings attached. It is claimed and I believe justly, that the fish mistakes the streamer fly for a small minnow. For this reason it has seemed illogical to attach any hackle to hair streamer flies.

The "wings" of this fly consist of a bunch of white hair topped with black. These are tied on separately taking care to dope well the bases of each bunch of hair as it is tied in. The jungle cock shoulders add much to the attractiveness of the fly and the easiest method of attachment is first to cement them in the position they are to assume and after the cement has hardened, to tie them in the usual way. This avoids the tendency of this feather to turn sidewise while being tied. If the head is finished, as is preferred, with a coat of plastic wood as shown in figure 4, this not only adds durability but to the appearance of the job. The plastic is finally given a good coat of first class black enamel paint.

One of such flies fished on the Madison River last season not only accounted for at least 6 of such fine trout as are shown in the accompanying photograph but resisted their cruel teeth sufficiently to remain in good condition at the finish.

Anyone interested in obtaining the materials mentioned may obtain information on this by addressing me care of the PENNSYLVANIA ANGLER and enclosing a self-addressed post card.

Recent raids on the English fishing fleet by German planes and submarines has caused considerably anxiety in English fishing circles. The need for fish to supplement meat in the British Isles has made it necessary to keep all fishing boats operating continuously. The attacks on the unarmed trawlers continues to grow daily and as many as 12 to 15 have been machine gunned or bombed in a single day.

TIOGANS ELECT BUTLER PRESIDENT

John Butler, of the Asaph Rod and Gun Club was elected president of the Tioga County Consolidated Sportsmen's Association at the annual dinner and business meeting, held at the Penn-Wells Hotel, in Wellsboro.

Other officers named were: John Austin of Gaines, vice-president; and Mahlon Northrup of Asaph, secretary and treasurer. Retiring officers are Cody Roby of Morris, president and Joseph Crooks of Morris, secretary and treasurer.

Fifty sportsmen attended the dinner. Retiring president Roby was elected the official delegate to represent the Tioga County organization at the annual meeting of the Pennsylvania State Sportsmen's Federation Harrisburg.

Retiring Secretary Crooks reported on the purchase of skeet and trap shooting equipment for the association, which will be set up at Bradley Wales Park, in the Pine Creek Mountain area, where the first annual outing of the association was held last summer. It was announced that Walter Bailey of Wellsboro, on whose property the outing was held has given the association permission to use it for trap and skeet shooting and other activities for five years, rent free.

There was considerable discussion regarding a suggestion that there be no dinner in connection with one of the quarterly business meetings during the coming year, and that a large banquet be planned in its place. Action on the suggestion was postponed until the next quarterly meeting to be held in the spring.

There was also discussion concerning the second annual outing at Bradley Wales Park. Details were left to the new officers for planning.

Resolutions adopted included recommendations for the better control of pests, and adoption of resolutions submitted by the Nessmuk Rod and Gun Club, of Wellsboro, which urged reduction of the open season on ringneck pheasants to a maximum of 21 days, no open season on anterless deer in Tioga County, and reduction of seasons and bag limits for several kinds of game.

The Nessmuk Rod and Gun Club acted as host to the county organization at the meeting. Arrangements were made by Mike Dartt and Lewis Corwin, president and secretary, respectively, of the Wellsboro club. Cody Rody, as retiring president of the county association, presided at the meeting. The regular monthly meeting of the Wellsboro club was combined with this gathering.

Doc Howe sends us this photo taken at the national casting tournament in San Francisco last year. Included in the group of champions, (standing, left to right) William Willman, Lee Sens, "Sib" Liotta, "Chummy" Keating, Bill Block and M. L. Sulser; Seated, left to right, Bill Henry, "Pat" Krause, Tony Accetta, Milt Kraft and Dick Miller.

Three cub bears treed by Mr. and Mrs. Clive Talmage of Apollo while trout fishing in Cameron County last year.

McKEAN SPEAKER AT SPRINGDALE

With nearly 200 sportsmen and their wives in attendance, the fifth annual banquet of Springdale Sportsmen's Club in the Springdale Methodist Church was the most successful of these annual functions staged by the club.

A fine lineup of speaking and entertainment was enjoyed by all present, with the whole program being carried out to an early conclusion, thanks to the capable job of toastmastering done by Jesse L. Humes, president of Tarentum Sportsmen's Club and former president of Allegheny County Sportsmen's League.

J. C. Fritz, president of the Springdale club, introduced Mr. Humes as toastmaster, following which J. Fred McKean, of New Kensington, member of the Fish Commission, gave a fine talk. He told of the projects being carried out by the commission with funds derived from license fees. He also advised the sportsmen of a bill pending in the Legislature which would enable the commission to purchase and establish fishing preserves. Mr. McKean cited that if the present owners would ever decide to abandon Springdale Lake, this measure would make possible, upon passage, purchase of this body of water by the Fish Commission to preserve it for district anglers' benefits.

Mr. McKean told a humorous tall story which brought roars of laughter from the house. The story was of a fisherman who upon casting into Conneaut Lake, had a strike followed by a laborious conflict with his quarry. Finally, with the catch reeled in close to the boat and with the angler just ready to pull it in with his landing net, a lightning bug alighted on his line and burned it off. The story qualified Mr. McKean for membership in the Liars Club of which Francis X. McCullough is president.

W. C. Ryder, game technician of Division G of the Game Commission, spoke briefly, urging sportsmen present to respond to the plea of Mr. Fritz to personally feed birds and game or to assist the club in its organized feeding and cover program.

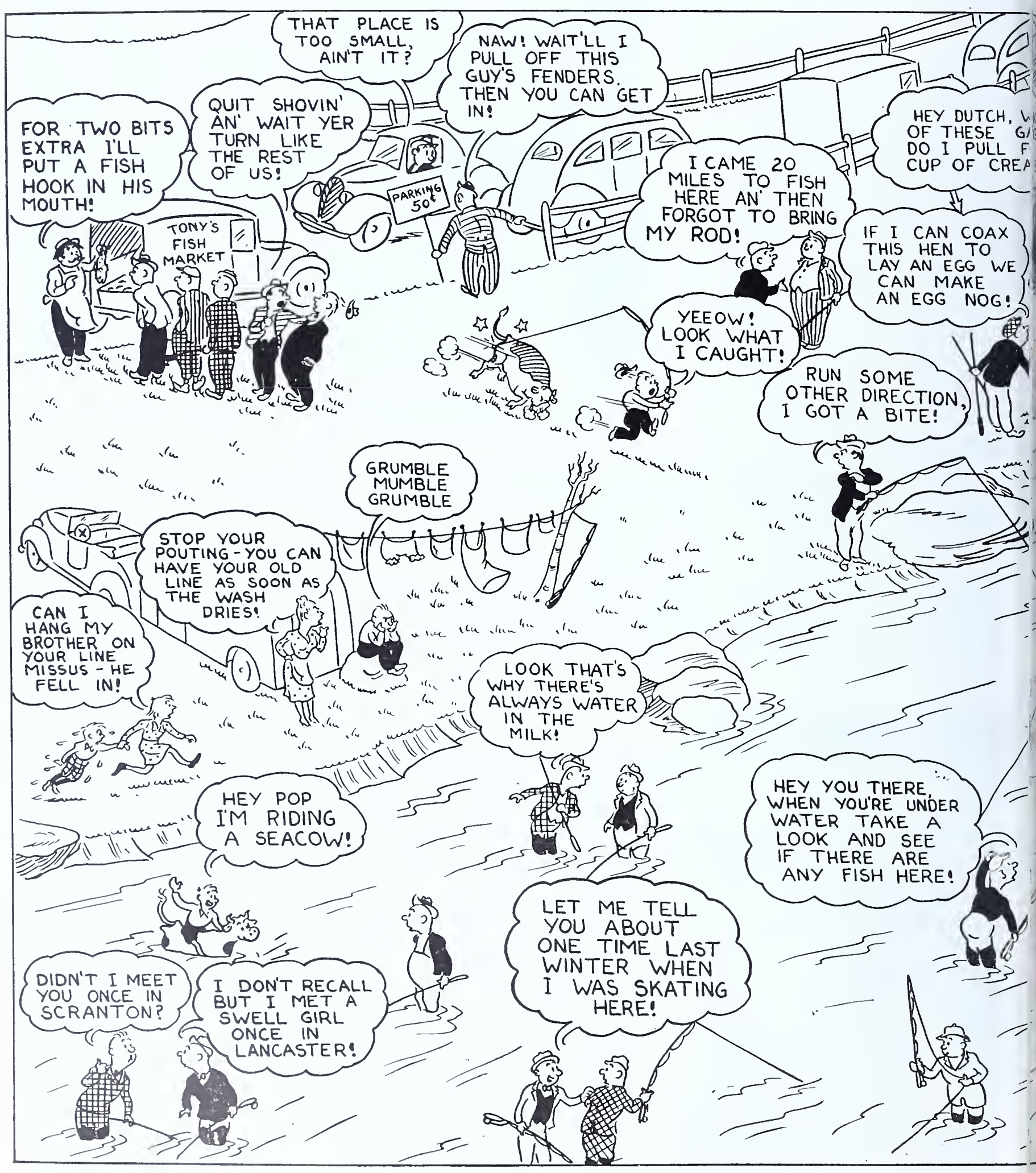
Sam Henderson, of Greensburg, popular fish protector for Allegheny and Westmoreland Counties, told of strides being made in conservation and in securing stricter observance of the game and fish laws.

Musical features included the Tarentum Lions Club quartet, accompanied by Mrs. Lee Howells, and solos by Mrs. Lydia Smith Flenner, accompanied by Mrs. Dwight Chapman. Both features were enjoyed tremendously by the audience. Bob Keller, of New Kensington, well known impersonator and former KDKA radio artist, gave two readings which were received with wild applause.

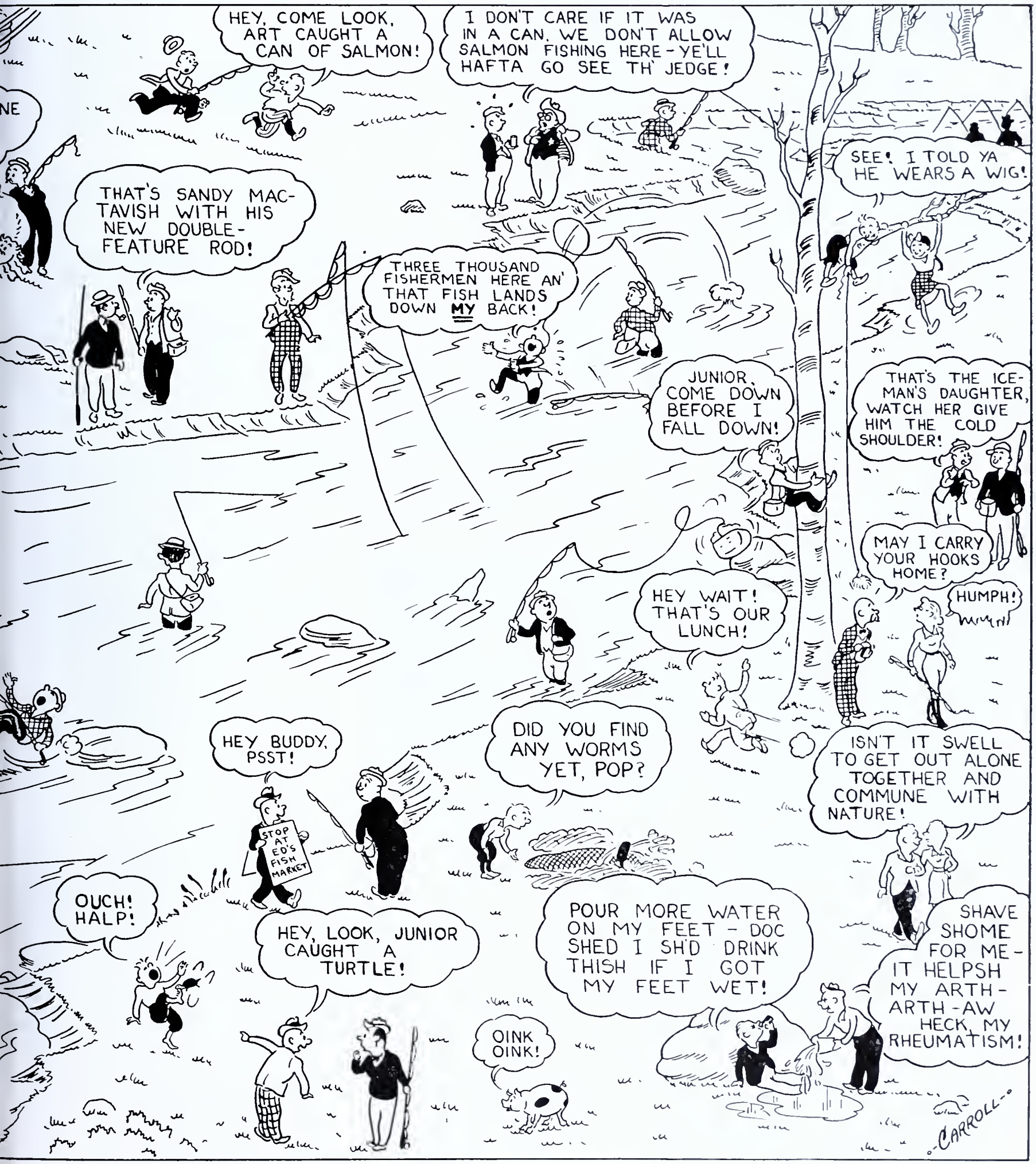
After the banquet, Thomas L. Aye, Jr., served as narrator during the projection of the splendid wildlife motion pictures taken by Dr. M. W. Heilman, of Tarentum, on his distant trips.

The things which no man can advertise successfully are the undeserving things.

MOST ANY OPENING DAY O



THE TROUT FISHING FRONT



Reckin they ain't no fish in our cricks an' runs so plum near puffect ez our speckled trout. Bein' ez I bin fishin' fer 'em fer nigh onter 45 yeres cum this seezun, I figger thet mebbe a few things thet hez cum ter my notice mite be wurth puttin' down in ritin'.

Taik them brookies in the leetle mountin run thet cums outer Spruce Gap. It shure is a brushy crick ter fish an' a feller kin go up there most ennyday an' ketch mebbe 30 in a cuppel hours. Ef he hez three out o' the bunch thet goes over 6 inches he's lucky an' it's bin thet way ez fur back ez I kin reckallect. Now then, I bin lookin' inter it moar close the last cuppel yeres an' there don't seem no uther reezun fer this then thet there ain't hardly ennything when it cums ter a food supply in the leetle mountin run. Then, down the valley erbout two miles below my place is a run not much bigger thet cums outer a limestone spring at Joe Bader's place. 'Tain't oncommon fer a feller ter taik speckled trout a foot long an' gude an' hevy when he fishes there. Thet run is jest plum full o' food an' since I bin checkin' on what you call them parr markins, saddlelike over the back, I ketched two brookies there last yere, each better'n 10 inches thet still hed sum sign o' these markins. Menny a speckled trout I've took in the mountin run thet wuzn't over 5 inches long thet hed nary a sign o' these markins. Semes like, since they say thet these markins usually disappere around the third yere, a feller don't need no moar proof thet food is whut counts.

Anuther thing I bin awatchin' on brookies thet I took hez been the differunce in color, pertective coloration ez it's called. Them trout I've ketched over white sandy bottom an' in open riffles is lite in color an' when I'd git one in a deep shady hole it wuz sumtimes ez black ez the ace of spaids an' with its red belly wuz jest erbout the purtiest thing the Lord ever put life inter.

We ain't got the speckled trout runs an' cricks we useter hev which shure is a pity ter my mind, fer I don't think ever a spunkier an' better fish lived. Fer thet reezun, us boys shure are hopin' thet whut few brookie runs we still got will be kept thet way fer a gude menny yeres ter cum.

Question: I am thinking of taking up fly fishing for trout this year but do not want to go into the expense too steeply for a starter. Could you give me some suggestions for a good practical outfit for a beginner?—T.K.J.

Answer: If at all possible, when you go to secure this outfit, have a fly fisherman of experience accompany you. His help in selecting rod, reel and line, from the angle of balance, will prove invaluable. Now, for the rod. As a starter, let us say that it will be around the ten dollar price class. A length of 8½ feet strikes our fancy in this instance, and the probable weight will be from 4½ to 5¾ ounces. If this rod has very strong backbone, the line that should accompany it will probably be a C level; for a more limber action a D level may be the ticket. Good American made level fly lines fit right into the beginner picture and some real rod work may be accomplished with them. From the expense angle the price should be from around $2.50 to $4.00. A single action reel costing from, let us say, $1.50 to $3.00, not too light in weight, and three important considerations have been taken care of. A half dozen leaders, having good heavy butts, and in length 7½ and 9 feet are next on the list. For fishing bucktails and the popular Marabou Streamers, the tips of two of these 7½ foot leaders should be 2x, perhaps the other 7½ foot 3x, two of the 9 foot tapering to 3x and possibly the other to 4x for fishing exceptionally low and clear water with flies of sizes 16 to 20. An extra supply of 3x tippets with possibly a few 4x thrown in may be found a life saver to have in the leader box. A box of good fly line dressing and either liquid or paste fly dressing to float 'em just about brings requirements to a conclusion. If you know a good local fly tyer, your problem in that respect will be a lot easier. Chances are he has an intimate knowledge of fly hatches appearing on waters you may be contemplating fishing, a mighty important angle. A list of good standby patterns in the dry list would include the Ginger Quill, the Olive Quill, the Pale Watery Dun, the Black Gnat, the Quill Gordon, Royal Coachman, Light Cahill, Midge and Alder. Hook sizes preferred seem to range from 12 to 16, with a few 18's and 20's thrown in. For early season fishing, the nymph and sparsely tied wet flies are important, and usually a good selection of these is available with a local tyer. The same goes for bucktails, brown and white, black, black and white and yellow being among the popular colors. Most fishermen prefer these lures with Jungle Cock eyes, and the bodies often consist of tinsel wrapping either silver or gold in color.

Question: Am interested in fishing for trout in Evitts Creek, Bedford County. How do I reach that stream, traveling from Pittsburgh? —J.M.

Answer: Take the Lincoln Highway to Bedford, turn right in Bedford, following the Horseshoe Trail for a distance of about 28 miles, turning left on a hard surface road about four miles this side of Cumberland, Md. This secondary route will take you to Lake Koon, and Evitts Creek, flowing into that lake is accessible from this point.

Question: Have heard that pine sawyers are mighty good early season bait for mountain trout. How do you secure them?—J.H.N.

Answer: Some of the finest catches of brook trout are scored on these white, tough grubs, usually one to two inches in length. In contrast to the white grub found in sawdust piles around the country woodshed, the sawyers are firm bodied, hence stay on a hook better. They are pointed at both ends and are easily distinguished when found. Wherever old pine logs on which the bark has rotted loose are to be found in the timber country, these grubs are to be located. Often by tearing off some of the loose bark, a sufficient supply for fishing may be obtained.

Question: Have spotted two mighty big brown trout in a stream near my home but fishing for them hasn't yet produced a strike in three seasons. Have also noted that mighty few other trout are to be found around where these big fellows hang out and the few glimpses I've had at them lead me to believe that each is well over 20 inches long. The stream is a high-banked meadow stream fed by a big spring that comes out at the base of a ridge. When should I be able to get a strike from one of these old timers?—J.C.E.

Answer: Chances are, in the stream you mention, these big brown trout are well fed and heavy fish. Likely, too, that they're bottom feeders, hence would be mighty tough to raise to a fly. That narrows the range of bait selection to natural lures that constitute a mouthful, minnow or nightcrawler, and, when the big yellow bodied grasshoppers appear, a 'hopper. Night fishing with a nightcrawler might yield a strike, and we'd put the best time for hooking one of them on this lure in that period immediately following a warm heavy shower when the stream is becoming murky. It's a known fact that some whaling big brown trout are taken each year on the humble worm when a stream has just become muddy following a short heavy rain. Offhand, we'd say you would be doing other trout in the stream a service in taking these big fellows, for, from your re[illegible] mighty good ground for be[illegible] are cannibals.

The Angler's Notebook

By Dick Fortney

ONE way to get out line when casting with flies where vegetation is troublesome is to use the snap cast. Grasp the end fly and pull back straight, using a line about the length of the rod, and then let go. The flies will shoot straight out through the brush.

* * * *

Lots of fellows prefer to still-fish. The fellow who gently raises and lowers the tip of his rod occasionally, getting the bait in motion, will have the most strikes. Obviously a fish will see a bait that is in motion more quickly than one which is lying still on the bottom of a stream or pond.

* * * *

Worms should not be kept in a tin can. Put them in a porous earthen jar filled with green moss, dampened and then wrung out. Feed worms portions of whites of hard-boiled eggs, a teaspoonful of cream, or bruised and well shredded celery. Keep them in a damp place and moisten the moss occasionally.

* * * *

An old-timer says: "In slow moving water fish upstream, and in swift running water fish downstream".

* * * *

The fellow who catches fish is the fellow who remembers that the easiest places along a stream are the very places where all the fishermen stop. So he takes time to locate spots that are hard to reach and difficult to fish once they are located. His reward is good fish which are seldom, if ever, visited and offered temptation by other anglers.

* * * *

If the beginner at fly casting will try to snatch the fly away so quickly that a rising fish cannot get it, he will do just what he ought to do. In other words, the strike must be made the second the fish darts at the fly. Usually a quick twist of the wrist does the job.

* * * *

Wear heavy woolen socks, over silk or cotton socks, inside the fishing boots. They not only serve as pads for the feet, but they also absorb perspiration, and in cold water they keep the feet comfortable.

* * * *

A handy pocket case for carrying such odds and ends as hooks, split shot, snaps, flies, and what-not can be made from an old spectacle case. The case fits easily into a pocket, and the spring-hinged top always remains safely closed.

* * * *

Don't throw away the old fishing creel if you get a new one this spring. Fill it with moss and keep worms in it. The air can circulate freely through it and help to keep the worms lively.

* * * *

[illegible] fishing is logical when live [illegible] or bait.

Trout seek cover instinctively, and the flies or bait that float past locations where shelter exists are going in the right spots. The careful angler looks over the stream, picks out these natural places of shelter, and concentrates on them.

* * * *

The correct manner in which to join a fishing rod is to put the tip into the middle joint first, then attach the butt. In taking a rod apart, use a straight pull. Reverse the process in putting it together; that is pull the middle joint from the butt first.

* * * *

Brown trout hug the holes under banks and beneath trees and overhanging brush during sunny days, except when they are feeding. Brook trout prefer to lie out in the open and to "hide" in the middle of a stretch of swift water.

* * * *

The angler who uses an expensive line is wise if he buys a reliable line dressing and uses it according to directions. Otherwise, the line may become dry and brittle and may crack and chip, eventually rotting and becoming absolutely worthless.

When casting a dead minnow it should be hooked through the mouth first and the point brought out through the gills and reinserted through the backbone at the dorsal fin. This method of baiting gives the minnow just the right amount of bend so that it will have a natural movement when drawn through the water.

* * * *

Unventilated metal cases damage many fishing rods. Drill a hole in the top and one in the bottom of the case. This will provide some ventilation, if you carelessly put your rod away in a damp cloth bag. The bag will at least have a chance to dry out before rot and mildew set in.

* * * *

Keep a fine file in the tackle box. The kind known to the trade as a needle file is the best for the fisherman. The stem is round and the blade flat on one side, tapering to a fine point. With this file the points of hooks may be sharpened, and so keen is the edge of the tool that it will cut through brass and copper wire as does a delicate saw.

* * * *

Do not make the mistake of getting a reel that is too small. The reel spool should be fairly large in circumference and narrow, so that the line nearly fills it. Cheap line may be used as a base on the spool, with the working line spliced to it.

* * * *

Streamer flies of almost any color are good lures for big trout at night.

March is the month when sucker anglers appear in full force, opening the fishing season in Pennsylvania. This scene was snapped along Fishing Creek, in Columbia County, which each year yields some fine catches.

Waders vied with shore fishermen at Half Way Dam on opening day of the 1939 trout season.

PLAN REARING POOL

John B. McCool, Clinton County farm agent, has been elected president of the Clinton County Fish and Game Association for 1940, succeeding Frank F. Marshall, of Ridgway, formerly of Lock Haven, who served the association as president for seven years. The other officers are: First vice-president, W. Curtis Lauer; second vice-president, Thos. F. Kessinger, of Beech Creek; third vice-president, Richard H. Yohe, Lock Haven; treasurer, Carson C. Dietz; financial secretary, George F. Rishel; recording secretary, Hartman B. Herr.

New members of the board of directors, named for three years are: Frank A. Shroat and Mr. Lauer, Lock Haven; Lyle Wagner, Flemington; Charles J. Lindsey, of Beech Creek; and M. C. Coleman, Renovo. Louis F. Winner, Earl F. Ritter, Frank M. Sanderson, of Mill Hall, and Mr. Yohe were named to serve unexpired terms of two years on the board.

The county organization appropriated $100 for the rearing of 5,000 trout at the Mill Hall rearing pool and 10,000 at the Elks' pool near North Bend. The sum of $100 was also appropriated for purchasing or raising game for distribution in 1940. The association voted to hold a banquet again this year, the date to be determined later.

SMITH ELECTED BLAIN PRESIDENT

The annual reorganization meeting of the Blain Hunting and Fishing Association was held in the parish house of the Lutheran Church at Blain. About 50 persons attended. The following officers were elected for the ensuring year:

President, W. L. Smith; vice-president, John Hench; financial secretary, L. M. Kern; recording secretary, C. R. Smith; executive board, Galen Hench, John C. Martin, B. D. McPherson; distribution of game, Book Stambaugh; membership committee, Paul McKeehan, B. R. Rohm, John Roush; directors, Miles Britchar, R. M. Smith, Robert Gray; delegate to State Federation of Sportsmen, W. L. Smith, and alternate, Paul McKeehan.

FAVOR PRESENT LICENSE FEE

Starting the new year with a changed period of membership, the Crawford County branch of the Pennsylvania Sportsmen's Council announced after its last meeting at Springboro it has set a goal of 3,000 members for this year, reports Ken. Williams of Meadville.

With a January 1 membership period and an intensified drive for members slated between now and the time for the annual meeting in late March the organization expects to increase its present membership of about 1,900 by almost half, officers said.

C. W. Fay, treasurer, accepted the chairmanship of the membership committee and announced that the directors of the branch's 14 affiliated community chapters will cooperate in an effort to achieve the goal. Raymond A. Armstrong of Townville, resigned in favor of the Titusville man as head of the committee.

The Crawford County sportsman's organization, one of the oldest in the state, is the outgrowth of the old Wildlife League and has been active under its present name since 1934. Its affiliated chapters are located in Meadville and Titusville and in a dozen other districts of the county.

At its most recent meeting, held at Springboro on January 29, it voted to urge upon the Fish Commission that the present fishing license fee be kept, heard talks by Game Protector George Keepler, Fish Warden Gerald Munson, and Refugekeeper Burt Oudette, and received reports from a dozen community chapter directors.

Officers of the branch are: Merle F. Bideaux, Woodcockboro-Venango, President; Jack Hezlep, Meadville, Vice-President; Dr. George Buehler, Linesville and Herman Weed, Lincolnville, Secretaries; C. W. Fay, Titusville, Treasurer; Ivan E. Burkley, Cambridge Springs, Divisional Director.

TROUT STOCKED

The Milton Fish and Game Association has been very active this winter distributing feed and placing feeders for the wildlife of this area.

From 40 to 50 tons of apple pomace and 50 bushels of corn have been placed in the White Deer section. Sixteen permanent grain feeders have also been built. In the farming area around Milton, Montandon and Watsontown, 20 permanent grain feeders, 600 pounds of scratch feed, and 12 bushels of ear corn have been distributed. A load of brown trout has been placed in Rapid Run, Little Buffalo, Buffalo, and White Deer Creeks, while Spruce Run was stocked with brook trout.

TRESCKOW OFFICERS

The following new officers have been installed by the Tresckow Gun and Game Club for the ensuing year:

President, John Kairewich, Jeanesville; Vice-President, Adam Gutosky, Jeanesville; Secretary, John Super, Jr., Tresckow; and Domenick Lockwood, Treasurer, Tresckow.

Opening day of trout season, 1939, on Half Way Dam in Union County, a scene that in all probability will be reenacted this year. Rain didn't phase these anglers.

Shelly Yohn of Honey Grove with a nice catch of brook trout taken late last season.

FRENCH ADDRESSES SAYRE MEETING

Over 700 sportsmen and sportswomen thronged the Sayre high school gymnasium for the annual banquet of the Sayre Sportsmen's Club, breaking the previous record for the affair by nearly 150 persons.

Seated at 9 tables, 8 of which ran the full length of the 100-foot long gymnasium, the throng is believed to be the largest ever to attend an affair of this kind in the valley. It was the biggest attendance in the club's history.

Commissioner of Fisheries C. A. French was the principal speaker, his address being given in the auditorium following the banquet. He was introduced by Dr. Harry S. Fish of Sayre.

Vern Hicks was reelected president of the organization for 1940 at the business meeting. Other officers are: vice-president, Albert Wheatley, reelected; secretary, Raymond Snyder; treasurer, Andrew Zeller, reelected; directors for three years, Harry Wallin and John Ryan. Mr. Wallin was the retiring secretary.

Cecil Smith won the trophy for the largest smallmouth bass caught last season. Hooked in the Susquehanna River October 17, Mr. Smith's bass was 19 inches long and weighed 3 pounds 7 ounces.

Commissioner French gave some interesting figures on fish distribution in the state, asserting that in 1939 a total of 305 tons of fish were placed in Pennsylvania streams.

The number of fish planted in Bradford County streams greatly exceeded that of any previous year, he said, and revealed the totals as follows: 11,650 brook trout; 21,000 fingerlings; 2,000 bass; 814,000 perch; 1,536,000 yellow perch; 6,100 sunfish and 14,200 catfish.

He said the commission was taking cognizance of the "man who fishes with a pole, as well as the one who uses a rod," and pointed to the increased amount of sunfish and catfish which have been stocked in streams as evidence that the state is looking after the more modest angler.

He also described the efforts which are being made in the large cities to get youngsters interested in fishing. He hoped, he said, that this program will bear fruit by keeping boys out of the path of crime, and stated that efforts along this line were being met with huge success, with young boys taking a great interest in the sport.

The problem of violations, he said, was one of the most vexing facing his department, and he urged anglers to report any violations they might encounter. "You owe it to yourself and to the sport," he said.

Stocking of streams had been curtailed last fall, Mr. French stated, because the streams of the state were at their lowest point in 45 years, and officials feared the fish would be destroyed. The program will be renewed in the spring, and he anticipated well-stocked streams by April when the season opens.

He described the state fish hatcheries, and stated that 1,000 tons of food yearly are consumed by the growing fish in the Pennsylvania hatcheries.

Following his address several reels of motion pictures were shown by the commissioner.

The dinner was prepared and served by the members of the high school Parent-Teacher association. Their efforts were greatly appreciated, and a vote of thanks was given them for the remarkable efficiency with which the audience was served in less than 45 minutes. Mrs. Vern Hicks, president of the P-TA was in charge.

Rev. Glen B. Walter, rector of the Church of the Redeemer offered the invocation. Following the dinner the sportsmen adjorned to the auditorium where President Vern Hicks opened the business meeting.

Mr. Wallin, secretary, and Mr. Zeller, treasurer, read their reports and John Ryan, chairman of the membership committee, announced the winners in the campaign. The complete list has not yet been compiled. Mr. Ryan stated that the membership is about at the 1,000 mark, only 100 less than the goal set when the campaign opened.

Mr. Hicks gave a report on fish and game received by the club, and Mr. Wallin was presented with a gift in appreciation for his many years of work with the club. Gifts were presented to several dozen sportsmen by Mr. Ryan and Oscar Hancock.

STONEBACK HEADS LANSDALE CLUB

William Stoneback, Colmar, was re-elected to the presidency of the Lansdale Sportsmen's Club, at the annual reorganization meeting, held Thursday evening, January 23, in the American Legion Hall, Lansdale.

Ross Zander, Vice-President was re-elected to that office. Christian Eurich succeeds Arthur L. Thomas as secretary and Eli Hendricks succeeds Avery Ellis as treasurer.

Delegates elected to the Montgomery County Federation are: Game division, Harold Gibson and John R. Hafer, Sr.; Fish division, Fred Eurich and Lester Shiffert; Forestry representative, Ross Zander.

John Ruth will head the ways and means committee, and Magistrate Howard F. Boorse and Mr. Thomas have been named to the legislative committee.

Christian Eurich presented prizes for the largest fish caught in the recent contests as follows: For the largest smallmouth bass, Earl Scholl; for brown trout, first prize, George Zuck; second, Lester Shiffert; brook trout, Mr. Shiffert. A special consolation prize was awarded to Fred Eurich for the big fish that "got away".

It was announced that 96 rabbits have been released by the Game Commission, in the vicinity of Lansdale, as part of the local quota.

Wing walls constructed in Lancaster County trout streams have proved effective bottom scouring devices.

BIG FISH CONTEST AT HONEYBROOK

Members of the Honey Brook Rod and Gun Club of Honey Brook staged a big fish contest last year in which keen interest was shown. Prizes were awarded in the following classes:

Largemouth bass: Length 20½ inches, weight 4 pounds 4 ounces. Taken by Charles L. Hosler of Honey Brook.

Smallmouth bass: Length 15 inches, weight one pound 14 ounces, taken by George Abbott, Honey Brook; second, length 12½ inches, weight one pound 2 ounces, taken by T. J. Rauch, Honey Brook.

Brook trout, first: 11 1/16 inches, caught by T. J. Rauch; second, 10⅞ inches, caught by George Abbott.

Other activities of the club, outlined by Charles Hosler, secretary, included: assisted in stocking local streams with about 1200 trout and 600 bass; paid bounties for killing watersnakes to 55 boys; secured 10 Junior Conservationist medals from Fish Commission for boys killing 10 or more watersnakes; paid additional bounties to four boys for killing 25 or more watersnakes.

"We also put on our annual get-together meeting which is open to the public", he writes. "At that time we furnished instructive entertainment with the idea of bringing about a closer relationship between the club and non-members".

NORTHEAST FAVORS LICENSE INCREASE

A five-hour general discussion and vote on a big batch of important resolutions to be presented for consideration at the State Federation meeting, featured the meeting of the Northeastern Division, Pennsylvania Federation of Sportsmen's Clubs, held in the Scranton Chamber of Commerce building.

The meeting was largely attended, with delegates being present from Lackawanna, Carbon, Luzerne, Monroe, Susquehanna, Wayne and Wyoming Counties. Jack L. Neiger, of West Scranton, president of the division, presided.

Outstanding resolutions adopted unanimously pertained to ice fishing and the increasing of annual Pennsylvania fishing licenses 50 cents, the increase to be used for the purchase, under proper terms, of waters and land for public fishing. Under the terms of the resolution, a fishing license in 1941 would be $2.10, instead of the present $1.60, but the measure must be passed by the State Legislature before it would become law. Sportsmen in Northampton and several other counties in the state have also approved of the increase in fishing license.

The resolution on ice fishing called for legal action from Dec. 1 to Jan 31, inclusive, each year, seven days a week, with three tipups, a limit of fifteen inches on pickerel and a daily limit of five pickerel and fifteen perch.

What's a touch of cold weather, Edward Bates, youthful Harrisburg angler wants to know. Leo Luttringer, Jr., of the Game Commission snapped this photo of Eddie on the morning of December 2, 1939. Although the day was cold and drizzly, he was on his way to fish in Wildwood Lake. An important item of his equipment was a big can of worms. "I'd rather fish than see a Christmas parade", he said.

MANY NOVEL METHODS TRIED IN FISHING

Novel methods of fishing listed by the U. S. Bureau of Fisheries show that the art has progressed a long distance since the days of the barefoot boy who "dunked" a worm with a bent pin and piece of string, attached to a home-made pole.

Airplanes and radiotelephones, glass-bottom boats and carrier pigeons, telescopes and bows and arrows are included among the unusual paraphernalia used by modern anglers reported to Bureau experts in surveys of the fisheries industry conducted under the national conservation program.

Among other things, the surveys revealed:

Airplanes have been used to plant fish in Canada and the United States, in operations by which cans loaded with water and fish are discharged by means of parachutes from the planes.

Pilchard fishing in Oregon is carried on with the aid of airplanes, whose pilots "spot" the schools of fish from a height of from 1,500 to 5,000 feet in the air.

On the Atlantic coast the radiotelephone is used to summon fishing parties to a point where the fish are biting, and in New Hampshire a glass-bottom boat was used on Mystic Pond to trace the course of brook trout.

Pigeongram service has been provided for 3 years in New Jersey, where a 16-year-old boy evolved the idea of placing carrier pigeons on fishing cruisers so that anglers might speedily send urgent messages from ship to shore.

Fishing with bow and arrow for barracuda and bass off Santa Monica, Calif., is another unique form of sport reported to the Bureau. The steel-tipped arrow has a long cord attached which retrieves the fish.

At Monrovia, Calif., an angler recently employed a telescope for bass fishing. This method enabled him to locate the feeding grounds in a depth of from 15 to 20 feet and drop to the bass the kind of bait they liked.

Kite fishing is employed near Catalina Island, Calif., when fishing for tuna, sailfish, and the like, the kite being attached to the line with a piece of thread which breaks when the fish is hooked.

FRENCH AND GORDON SPEAK AT LUNCHEON

Seth Gordon, executive director of the Pennsylvania Game Commission and Charles A. French, Commissioner of Fisheries and chairman of the Pennsylvania Board of Fish Commissioners were the main speakers at a Dutch luncheon staged by the Huntingdon County Game, Fish and Forestry Association at the state armory in Huntingdon.

Over 400 sportsmen from Huntingdon and vicinity attended the affair which was the finest of its kind ever held in Huntingdon. A number of prominent sportsmen from other counties also attended the meeting.

Interesting technicolor moving pictures, "Conservation In Pennsylvania", and refreshments concluded the evening's program.

Harold Fisher, president of the sportsmen's club, served as chairman and introduced Mr. Gordon who gave a most interesting address.

With an appeal to the sportsmen for their continued cooperation Mr. Gordon told of the progress that has been made by the State Game Commission and forecast "better hunting to come".

Pointing to Dr. Joseph Kalbfus as the father of the Game Commission and "Daddy" Rothrock as the father of Pennsylvania conservation the speaker went on to show the great task that faced and still faces the Game Commission. Although the commission is over 43 years old it was not until the hunting license law was passed in 1913 that an income for the work of the group was provided. The first money from this source was available in 1915. In that year 305,000 hunting licenses were issued. In 1939 there were 640,000 licensed hunters in the state.

The changing times and conditions require the Game Commission to alter its program to fit the situation, Gordon declared. With competent commissioners the board has been able to do this in such a way that Pennsylvania can boast that it now has more game than 30 years ago.

Over 15,000 acres of land in Huntingdon County is owned by the Game Commission, Gordon revealed. Another 2,200 acres is under contract, prior to purchase. Another 7,400 acres is included in nine units, known as refuges or game lands. Three auxiliary refuge units in the county contain an additional 2,300 acres. In addition to all these acres there are 65,000 acres of forest land in Huntingdon County, most of which are open to hunting.

In the past nineteen and a half years the Game Commission has spent $19,000,000. Thirty-two per cent of this amount is for protection, 15 per cent for land purchase and another 15 per cent for land management, bounties, stocking, etc. Gordon pointed out 58 per cent of the Game Commission funds are spent for land, restocking and care. Fines imposed for violations average 10 cents per hunter.

In speaking of the wild turkey program Mr. Gordon stated that turkeys now are of a better quality than ever before. The average turkey kill in Huntingdon County from 1915 to the past year (24 open seasons) has been 4,000 turkeys. In 1937 there were 6,600 turkeys shot in the county. In 1938 there were 6,766 and in the past season an equal amount, Gordon revealed.

The executive director reminisced a bit on the days when he was a school teacher in Huntingdon County. J. G. Dell, of Huntingdon, was county superintendent at the time. Mr. Gordon also spoke of his love for the Huntingdon County mountains and told of his desire to make frequent visits to the area.

Gordon complimented the Huntingdon County group on its fine program and pointed out that over 1,000 similar clubs are active in the state, all working for conservation and better hunting.

William G. Fluke, of Saxton, a member of the Game Commission, preceded Gordon on the program. He made a few brief remarks.

Commissioner French told how the Fish Commission has expanded its program to meet the needs of the times.

With Sunday fishing now permissible, Pennsylvania fishermen are permitted to fish 365 days out of each year. To plan a program to meet the need of 800,000 fishermen is the task of the state agency. Last year 400,000 licenses were issued and French estimated an equal number of boys and girls under 16, who are not required to have a license, cast a line in Pennsylvania waters. The law permitting Sunday fishing added 150,000 fishing licenses to the state total.

The Fish Commission has expanded its program at the various hatcheries to meet the need. Study and research have had no small part in a better program for the state fishermen.

Mr. French cited a number of figures to show the kind of a deal Huntingdon County is now receiving: In 1936 the county received 13,020 trout; in 1939 the figure was 28,600, all of legal size. In 1936, 4,000 bass were stocked in the county; in 1939 there were 16,000 dumped into county streams. Seven thousand catfish were stocked in the county in 1936, while last year the figure was 17,000. Sunfish restocking in 1936 was 13,000, while in 1939 it was 23,000. Minnows stocked last year amounted to 25,650 as compared to none in 1936.

Mr. French also stated that the Fish Commission spends $100,000 per year for protection.

A new program of stocking fewer and larger bass is being tried at the present. In 1939 the nine Fish Commission hatcheries fed a total of 1,069 tons of food at a cost of between 2¼ and 2½ cents per pound.

When you always tell the truth you don't have to remember what you've said.

Many a man would have kept out of hot water had he stuck closer to cold water.

End of a stirring battle on trout-famous Spring Creek, Centre County, on opening day last season.

DROUGHT TROUT

(Continued from Page 5)

still surprised. It was 12½ inches long and in fine condition.

I sat down and examined that brownie from every angle. It had a good, healthy color, it was plump and heavy and had a full stomach. In fact, it was as good as any its size I had taken all year. It just didn't seem possible, but there it was. Not only that, but I took five more out of that stream before going home, and everyone was in good shape and they tasted delicious. I repeated this catch later on in a section further upstream.

I'll admit that fishing under such conditions is not one's ideal trout fishing but it can be done. Of more importance is the lesson it teaches one and that is—don't worry too much about the drought trout, they can take care of themselves.

For some years I kept many different kinds of fish in a pool in my yard for purposes of study. When draining the pool to clean it out, I often watched the fish to see what they would do as the water went lower and lower. The pool was divided into various sections by rocks so that there were many holes for the fish to hide in. As the water grew lower, I marveled at the way the fish would leave hole after hole just before the water became so low they couldn't have escaped. Not once did I ever find a fish trapped. When the last and deepest hole was the only one to contain water, every fish was in that hole.

In that pool the water went down fast and should have had much more chance to catch a fish than water in a stream that takes days and weeks to go down. If you will recall, it is rare that anything but bait fish are ever found in the pools along a stream which have been cut off from the main stream.

The fish know enough to keep to the currents for where there is a current there is room to move. As a stream goes down, the currents change, seeking out the deepest channels in the stream bed. The fish move with these currents and thus assure themselves of safety.

It is a popular theory that during droughts the trout congregate in pools and that the small ones are easily devoured by the larger ones. I don't believe that is true for the very reason that not once did I take a trout out of the big pools but I did take them out of the little spots which were among the rocks far from any big pool. I believe that the trout are scattered all over the stream, hidden away in out of the way places, wherever there is enough current to bring them food and air. All my experiences point to that conclusion.

If this were not true, low water would mean a sudden decrease in the fish in a stream, not only because the larger fish would eat the smaller, but also because the vermin would soon locate them and wipe them out. We all know that the moment a heavy rain comes and raises the water, the trout are all over a stream, feeding. Were the trout all congregated in the big pools, it would take days for them to become so well scattered throughout the waters.

It has also been my experience that the currents or flowing waters of a stream, no matter how low, are much cooler than the water in the pools. This would also tend to keep the trout out of the pools. And, finally, there is the problem of food, which would be much more abundant per fish outside the pools. It must be remembered that the nymphs and other water life will also follow the currents during the receding of the waters, thus assuring each fish of ample food.

Anyhow, that's how I feel about these drought trout, and I'm not going to worry about them any more. I'll bet our fishing will be as good if not better, next year because of these low waters. Think of the number of trout which would have been caught had the streams been normal. Thank heaven so many fishermen get easily discouraged when low water comes—it's great for conservation.

But—if you want to fish for trout and you can only get away when the waters are low, don't give up—go anyway, hunt out the hiding spots, cast carefully and you'll take trout. It may not be so much fun as under normal conditions, but I doubt if anyone could get more of a surprising thrill than I did out of my first big drought trout.

Yep—the trout fishing will be just great next season, drought or no drought!

SELINSGROVE ANGLER INVENTS NOVEL ROD

Walter Mingle, of the Selinsgrove State Colony, recently demonstrated his newly invented fishing rod, on which he has just received a patent from the United States Government, before the annual reorganization meeting of the Snyder County Sportsmen's Association in the Dauntless Hook and Ladder Company.

Mingle, who resides along Penn's Creek, Snyder County's foremost stream for fishing, has equipped an ordinary rod with an electric light for night fishing. Batteries are located in the handle and the bulb for illumination at the tip of the rod. The light is small enough to be within the laws governing night fishing but large enough to show when the angler has a bite.

The local sportsmen were much interested in the new invention and enthused following the demonstration.

The association re-elected Roland E. Fisher, president; V. Mark Bogar, vice-president; Chester L. Ludwig, secretary-treasurer; Charles H. Feehrer, assistant secretary-treasurer and delegate to the annual convention of the Federation of Sportsmen's Clubs at Harrisburg.

Friday, March 29, was set as the date for the annual banquet to be held at the fire company home with speakers, exhibits and motion pictures.

Decision was made to construct pens for the raising of ringneck pheasants and it was reported that the State Game Commission released between 500 and 600 rabbits throughout the county two weeks previously as part of the propagating program.

NEW KENSINGTON CLUB REELECTS FREDERICKS

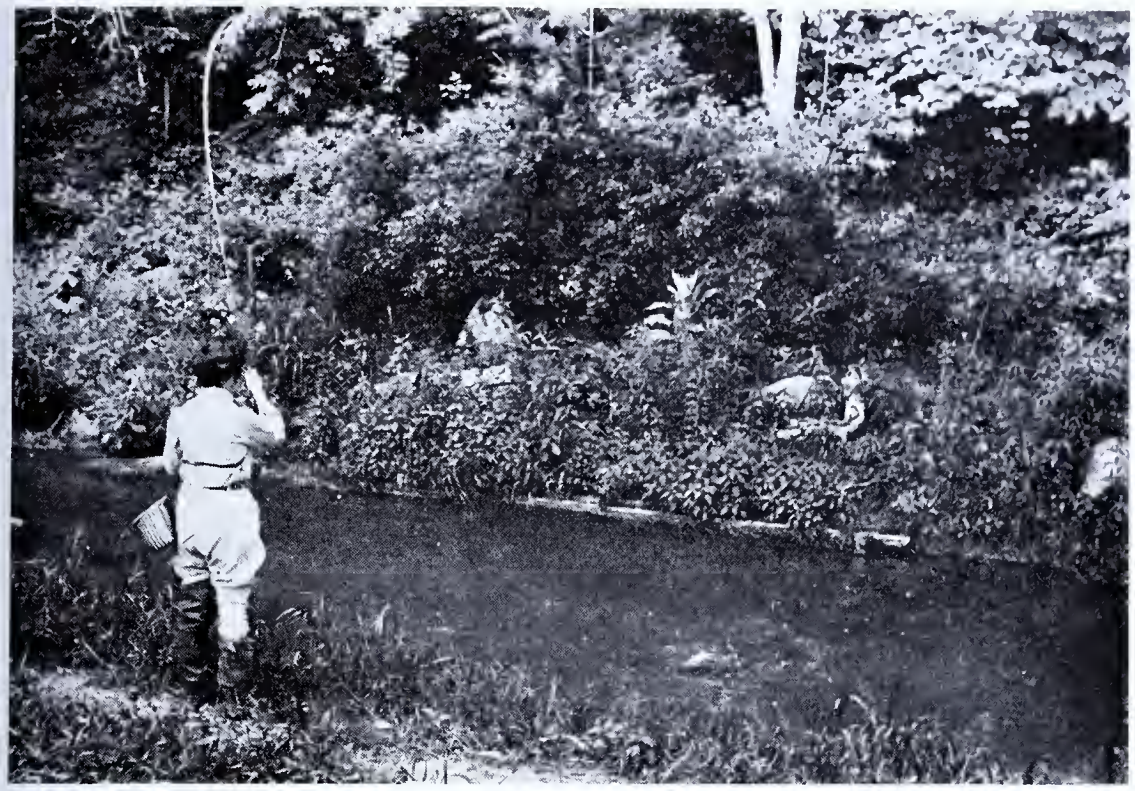
Fred J. Fredericks, city treasurer of New Kensington, and a veteran sportsman, has been elected to the position of president of the New Kensington lodge of the Wild Life League for the twelfth consecutive year.

Mr. Fredericks has been extremely instrumental in the activities of the organization, which recently completed payment on the beautiful lodge it owns in the Little Puckets Creek valley.

Other officers re-elected include A. T. Miller, vice-president; M. K. Renshaw, secretary; H. E. Lyle, treasurer. The trustees chosen are E. B. Small, Frank Dominick and G. W. Zimmerman.

A 16 inch smallmouth bass taken on a 4½ ounce fly rod furnished plenty of excitement for W. E. Price of Altoona before it was landed one day last season, he writes. The catch was made on helgramite in Canoe Creek.

Robert Scully, Sr., Robert Scully, Jr., Clyde Cramer and Bill Caldwell with an early season catch of rainbow trout from Clear Creek, Jefferson County. The trout ranged in size from 8 to 14 inches.



Milady hooks a good one in the ladies section at the Spring Creek Project. The comely anglerette is Mary Jane Agne of Sewickley.

HORN AGAIN HEADS LYCOMING CLUBS

Walter C. Horn of Williamsport was re-elected president of Consolidated Sportsmen of Lycoming County at the annual meeting in Williamsport with over 200 members attending.

Chosen to assist him were the following officers: Vice-president, W. Herbert Poff, Williamsport; second vice-president, J. Faries Sedam, Montoursville; divisional vice-presidents, Dalton W. Bell, Williamsport; F. Earl Brion, Liberty; Joseph A. Heim, Montoursville; D. G. Reed, Muncy; E. F. Hill, Hughesville; Charles H. Elder, Jersey Shore; Clinton M. Zellers, Montgomery, and Cloyd L. Myers, Bodines; secretary, S. Dale Furst, Jr., Williamsport; treasurer, George R. Hassenplug, Williamsport.

Mr. Horn named the following committee chairmen: Richard F. Williamson, advertising; A. D. Williams, auditing; J. W. Preston, banquet; W. Herbert Poff, picnic; S. C. Castner, educational; L. W. Stevenson, farmers-sportsmen cooperative; John Stahlnecker, entertainment; Edward Shultz, field trials; W. H. Corson, fish; Jay Clark, III, game distribution; A. D. Huffman, game farm; Alvin R. Bush, game feeding; Dalton W. Bell, game management; H. R. Gibson, legal; Ray L. Riley, legislative; S. Dale Furst, Jr., membership; Frank R. DeHaas, prizes; Bruce A. Hunt, publicity; Joseph A. Heim, Save the Loyalsock; H. L. Strouse, stream improvement; John C. Youngman, pure streams, and W. H. Bubb, vermin control.

Dalton W. Bell was named delegate and S. Dale Furst, Jr., alternate to the annual meeting of the State Federation in Harrisburg. A petition was presented to the association asking that the Rock Run which empties into Lycoming Creek be designated as a brown trout stream, was referred to the fish committe for action.

Ringneck pheasant prizes of $5 each were awarded to Fred R. Applegate, Williamsport; Henry E. Confer, Williamsport R. D. 2, and Arthur S. Hill, R. D. 2. The three annual awards are selected from numbered bands placed on the pheasants when they are released by the association in the spring.

In his report on game management, Mr. Bell said in his opinion the new wild turkey propogating area at Sand Spring Flats, near Rauchtown, is one of the finest in the state. The market value of game distributed in the county last year by the association—both from the game farm and game commission—amounted to $9,709.60, he said.

Total number of fish planted in the county in 1939 was given as 168,551, divided as follows: 59,800 brown trout, 31,951 brook trout, 10,700 rainbow trout, 2,600 bass, 8,000 catfish, 10,500 sunfish and 45,000 minnows.

It was stressed that Monday was the last day to report individual hunter's game kills to the State Game Commission and all those who have forgotten to return the postcard attached to their licenses were urged to do so immediately.

Attention was called in the report of George R. Hassenplug, forestry committee, to the fact that the Tiadaghton District was a leader last year in control of fire loss, improvement of fire lines, beautifying and road repairs, reforestration and stand improvement, tree and plant disease control.

The meeting closed with several reels of motion pictures in color shown by Randolph Thompson, of the game commission. A number of shots showed the stocking of bass in Pine and Loyalsock Creeks and other scenes of local interest.

Harry McQuiston, Sharon, has been hoping this year to equal the fine smallmouth bass he caught last season at Thompson's Eddy on the Upper Allegheny River. This bass measured 22 inches in length and tipped the scales at 4½ pounds.

DALTON BELL IS CENTRAL CHAIRMAN

Central Division of the Pennsylvania Federation of Sportsmen's Clubs named Dalton W. Bell of Williamsport, as chairman, at a meeting of delegates from the nine-county area held at the Larrys Creek Fish and Game Club.

Mr. Bell, a vice-president and active worker in the Consolidated Sportsmen of Lycoming County, succeeds Frank F. Marshall, Ridgway, formerly of Lock Haven, who was elected vice chairman. H. M. B. Weicksel, Renovo, was named secretary-treasurer.

By their election, Mr. Bell and Mr. Marshall automatically became the Central Division's representatives on the Board of directors of the State Federation, which met in annual session February 12 at Harrisburg. The board, composed of two delegates each from the nine divisions, met February 11 and acted upon resolutions submitted to the State Federation.

Mr. Bell, Mr. Marshall and John C. Youngman, Williamsport, state president, discussed the mine sealing project to close abandoned mines on the West Branch and Susquehanna River. They explained the WPA program would seal the mines, with the counties in the watershed supplying $23,000 as the sponsor's share of the expense.

In attendance at the meeting were delegates from Lycoming, Clinton, Tioga, Bradford, Sullivan, Union, Columbia, Montour and Northumberland Counties.

The happiest people are those who are too busy to notice whether they are or not.

George Kristofek of Larksville with a splendid catch of rainbow trout scored last season on Bowman's Creek, Luzerne County. Largest trout in the catch measured 20 inches and two others were each 17 inches.

REVIEW FOR BEGINNERS

(Continued from Page 3)

saturated with dressing acts as an abrasive after a short time. These dressers collect dirt and dust particles which is equal to sandpaper and if used continually will spoil the line finish.

The word grease as used here is misleading, though a common term, as applied to line dressing. Its purpose is not to lubricate but to increase the bouyancy of said article.

For cutting excess leader ends or removing flies you should have a small pair of scissors or other cutting implement. An ordinary nail clip serves the purpose but the handiest gadget I know of is a nail clip type which possesses also a stiletto and disgorger. The stiletto is very useful for cleaning the eyes of the hooks.

Some of the more adept dispense with a landing net but I insist on one and think it should be a part of every angler's equipment. One of light weight, small mesh and a 20 inch depth is desirable. Fasten with a French swivel snap to a ring connected either directly to the jacket or a short strap which can be thrown over the shoulder and kept out of the way when net is not in use.

When selecting a fly box, bear in mind that to carry dry flies you must choose one of sufficient depth to prevent crushing the hackles. There are various types of boxes for carrying bucktails, streamers, and eyed flies that are suitable. The box should not be a friction top can absolutely air tight as placing flies therein while wet will cause mildew and rust.

Leader boxes are inexpensive. The handiest have separate compartments for wet leaders and tippets and some, in addition, have space for the dry stock. Several pads are useful for keeping separated the different sizes of both leaders and tippets. The pads should be *well saturated* with a solution of one ounce glycerine and five ounces distilled water to which is added ¼ teaspoonful of baking soda. If you fish at least once every ten days you should keep the leaders and tippets in the wet pads all season. They will last longer by handling in this method than having them dry after each trip and soaking again before fishing. This, of course, applies only to silkworm gut. Nylon leaders need not be soaked.

If you have not tried a boot harness and have relied upon a belt to keep up your boots, you have a revelation in store. This little device prevents fatigue and really increases fishing pleasure many fold.

Only the most necessary smaller items have been mentioned. There are numerous others that help to smooth out what might otherwise be a rough and unpleasant trip.

The foregoing suggestions will, I hope, assist you in selecting the basic materials of happy and successful fishing trips. Next month we will discuss stream tactics.

Howell's Run, a small stream emptying into Wilmore Dam, Cambria County, yielded a fine brown trout to the angling skill of Fred Rose of Ebensburg in June, this year. An 18-inch brown trout, it tipped the scales at 3 pounds. A grasshopper was the lure used in making the catch.

OLD TOWN CLUB TO BUILD DAM

An ambitious project to build a fishing and boating dam with the aid of Borough Council and WPA funds is keeping the Old Town Sportsmen's Club of Grampian mighty active these days.

The dam is to be constructed on Kratzer Run about one mile south of Grampian on the highway to Mahaffey. It will spread the water over an estimated area of more than three acres, creating the appearance of a small lake.

Leaders of the sportsmen's club have obtained the support of a number of nearby clubs and also have received many private donations. This money will be used to purchase the site.

The new dam is envisaged as a recreation area for all nature lovers in the community. The club expects to ask the Fish Commission for fish to stock the lake, particularly for the town's younger fishermen. Swimming is another activity that may be engaged in.

The Grampian club, formed several years ago, patterned itself after the Old Town Sportsmen's Club of Clearfield and adopted the same name.

WINTER DREAMS

The swish of the line
  And the sing of the reel.
The tug of a brownie
  And weight in the creel.
What more do you want
  For a winter time sing,
And then a reality
  Early in spring.

—M. E. Detterline.

Joseph Patrick of Iselin, Indiana County, with a catch of brown trout scored on minnow in Spring Creek, Centre County, last season. Joe Trinko of Iselin submitted the photo.

OUR TROUT

(Continued from Page 11)

night feeder, a fact that may have a great deal to do with its predominance in hard fished waters. Big brown trout are prone to lie during the day beneath shelving banks, ledges or sunken logs, emerging at dusk to take up feeding stations and cruise about the shallows in quest of minnows. Very often, after a heavy shower, a nightcrawler fished in muddying water will lure them to the strike. It has been noted in the ANGLER that when the green drakes or shad flies are at the peak of their hatch on some of the great central county limestone streams, such as Spring Creek, giant browns forsake their bottom feeding tendencies to engage during that brief interval in an orgy of surface feeding. Looking to the future in angling for these big browns on heavy water (and certainly without casting aspersion on the fly rod) we venture to predict the coming of the casting rod into the picture. Let's consider such a casting outfit. The rod should be, to make the proposition most sporting, extremely light, of 6 or preferably 6½ foot length, and possess an exceptionally light tip action. The line should not exceed 9 pound test, and in conjunction with this line a leader, 8 to 12 feet, of artificial gut, say 6 pound test, should work in nicely. There are a number of exceptionally easy running casting reels on the market that should handle extremely light lures weighing, let us say, from ¼ to ⅜ ounce. In favor of such an outfit would be the ease with which we should be able to reach shore feeding browns with a minimum of disturbance. A pipe dream? Maybe, but it might be tried, at that.

For a number of years, the Fish Commission did not stock this species in Pennsylvania waters, yet it was noted that in streams where it had become established, the take of brown trout still continued to exceed the catch of natives. This fact alone would seem to indicate its amazing adaptability to our streams, and in years to come there is every reason to believe that it will be the predominant species in our hard fished waters.

FISHING LICENSES REVOKED BY BOARD

Under the provisions of the Act of May 2, 1925, and the amendments thereto, the Board of Fish Commissioners, at one of its regular meetings, revoked the Fishing Licenses of the following persons until after the date given below, and no licenses are to be issued to such persons until after that time.

NAME	ADDRESS	EFFECTIVE UNTIL
Darwin Bixler	Pottsville	July 29, 1940
Harry Bixler	Pottsville	July 29, 1940
Max Shapiro	Pittsburgh	May 14, 1940
Russell Stroup	Tionesta	July 7, 1940
John Fury	Plymouth	May 28, 1940
Daniel Diez	Plymouth	May 28, 1940
Peter Kondrat	Forest City	April 27, 1940
Harry Foster	Reading	July 5, 1940
Robert Schaeffer	Sinking Springs	June 3, 1940
G. Lloyd Keith	Wernersville, RFD	June 3, 1940
LeRoy Braker	Proctor	April 30, 1940
Thomas Larrabee	North Towanda	May 31, 1940

There's but one sure-fire way for ambitious young men and women to get into the movies: Lay down the price of admission at the ticket window.

This 20 inch brown trout, weighing three pounds, was taken in Little Neshannock Creek last season by Howard Frew of New Wilmington.

A TYRO'S DRY FLY ACES

By BARNEY FELSBURG

One of the issues of the *Pennsylvania Angler* had an article in it asking why not have the manufacturers issue a "Flivver Fly Casting Outfit". I agree one hundred percent with that idea and think that they should also include a good selection of flies with the outfit, so that a new-comer to this delightful game of fly fishing won't get taken over the coals like I did.

It was three years ago that I got the urge to fish for trout. Yep, after about ten years of bait-casting and bait-fishing for bass and pan fish, I suddenly decided I should know how to fish with a fly.

Well, I proceeded to buy me a fly rod and reel and all the other junk and also some flies. I caught fish that first year and I also got caught for every fly that anyone told me was good. I beleive I had about fifty different patterns of flies by the time the season ended.

So that winter I did some figuring. "If", says I to myself "there are editors and so-called experts who have fished for trout for years why not reap the benefit of their experiences". I did just that. I wrote to every editor and every angler of any note that I knew of and from most of them I received replies. Well, I checked and double-checked their answers. What answers? Why I asked them to give me the names of their six favorite dry flies and from their answers I made up my fly selection for the coming season.

Now here's how the favorites stacked up: Fan-wing Royal Coachman; Ginger Quill, Brown Bivisible; Badger Bivisible; Quill Gordon; and Wickhams Fancy.

I used those flies the next year and caught fish. Lots more than the first year. Now when I received my answers from the experts I noticed that several of these Experts listed at least four of the above six flies. "Well", thought I, "if they hit so close to the average why not take their list as a good one to carry. I did just that and here's what I got besides the above: Red Quill, Bread Crust Special; Bread Crust and the so-called Shad Fly.

I found that I had made no mistake. I took my share of fish on all of these flies except the Fan-Wing Royal Coachman and the Shad Fly. I haven't as yet taken one fish on either of these two flies.

Now from what I had gathered from this fellow and that fellow I came to a point where I had to experiment to see if a fly needed wings or not. The latter part of the second year of my trout fishing I used all those winged-patterned flies without having wings on them and my fishing buddy used them with wings and I caught more fish than my buddy. So what? Well, the third year found me with the following selection of flies in my fly-box: Bread Crust Special; Bread Crust; Badger and Brown Bivisible; Ginger Quill, Red Quill, Quill Gordon and Wickhams Fancy, all without wings.

And that third year of my fly fishing I caught my share of fish. But I still didn't catch any fish on the Fan-wing Royal Coachman or the Shad Fly. But that doesn't say they are no good. I still believe the experts know what they talked about. And I'll keep those two patterns in my book.

If you are a beginner (and maybe an Old-Timer) I feel almost certain that this selection will catch fish. As a beginner I found that using the flies without wings would give me longer lift from the flies for I wouldn't crack off the wings on my not-so-good beginner's back cast.

All the flies have standard dressing and are used without wings as stated before. The bread-crust special has a body from the quill of a guinea fowl (sort of a yellow quill with reddish ribs) and the hackle is red, about a shade of red lighter than that used on the Wickhams Fancy.

Looking at my percentage I find I could easily get away with six patterns and still have lots of fun and fish in the creel. Those six would be: Bread Crust Special; Ginger Quill, Quill Gordon; Badger; Brown Bivisible and Wickhams Fancy.

You won't be taking my word for it but just what the Experts told me and what I found to be true. Just try them for a season once. I'll bet you agree.

If you happen to have these flies on hand just study them closely. Besides the bivisibles all the flies have quill bodies. And the hackle runs in color from light to dark. They are all good floaters. And all in all I think the Experts knew what they were talking about.

Some of the Experts also sent me their favorite Wet Flies. That was simple to figure out. They stacked nearly one hundred percent, on an average, as follows: Ginger Quill, Red Quill, DarkWinged Coachman; Light-Winged Coachman and Gray Hackle. Instead of the Gray Hackle I use the Bread Crust wet fly which is practically the same as the Gray Hackle except it uses the quill body mentioned before. And I also use a Blue Quill which is a local favorite on several of our small streams right in my region.

I must give due credit to Roy E. Angst, of the *Pottsville Journal*, for tipping me off to the Bread Crust Special. I hope my book is never without that pattern.

I'll almost bet my pants that any dry fly angler, if he checks on his favorites will find that the selection as given will include from two to four of his favorites. By favorites I mean the flies that you use when you don't know what else to use and which will generally get fish for you. Am I right?

A successful man usually has to be coaxed to tell what he has done but a failure will brag for hours about what he would do if he were somebody else.

Action in Spring Creek in Bellefonte as giant trout that have made the Centre County seat famous, rise to hamburg tossed to them. Fishing is forbidden in this water.

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otherwise the solution evaporates quickly or splashes away with the motion of driving. This formula has the faculty of reviving even old gut to a surprising degree. Be sure to soak the felt pads of the leader box in the solution before transferring leaders from the container to the person upon stepping into the stream.

The idealist in choosing a leader for a specific purpose, would consider the caster's ability, species of fish, water condition, weather, wind, time of season, light, rod and line and kind of fly to be employed. Generally skilled dry fly and nymph fishermen prefer long, finely pointed leaders. Double strand gut leaders are never permissable to the flyman—in fact, the writer can not see any appreciable need for such an assembly on either bass of trout—even for a live bait fisherman.

To use the lightest possible leader is a rule dictated by good sportsmanship. With the average fly rod permitting only one and one-half to two pounds lift and as fish are generally leader shy as the season rolls along, light leaders and careful handling will offer mighty dividends. Beside the monotony, the writer's greatest quarrel with live bait fishing is the absence of thrill, the foregone conclusion due to the heavy tackle employed. With the usual 5 to 10 pound test leader, once a fish is induced to swallow the hook, there is nothing more to it—just a strong arm yank. If the strong arm method is not employed it is only due to the temperament of the fisherman; a twelve inch trout or bass may be heaved high, wide and handsome many yards back on the bank with such a leader and without the slightest chance of losing the victim. There is a spine tingling anxiety and thrill to the 3x or 5x that the heavy leader man may never know—unless he is blessed with much too vivid an imagination. And that thrill, that never to be equalled moment of tingling suspense, far out-shadows any pleasure to be obtained by the act of landing and killing a hapless, outclassed victim, which in the absence of that aforementioned too vivid imagination, never had the smallest chance to escape.

Buy the best in leaders is an omnipotent axiom in terminal tackle—never compromise. Let the length be dictated by the whim of the fisherman, but quality never. Some anglers, especially beginners, should stick pretty close to the conservative 9 foot length for dry fly work; as skill warrants, much longer leaders will be found advisable at times. Low clear water, bright weather, late season and shy fish usually dictate the extreme lengths. The longest standard leaders are designed principally for nymph fishing and many an angler's hesitation in using this type lure may be attributed to barren days due to poorly chosen terminal tackle.

Generally speaking, however, the nine footer for all-purpose use is a pretty safe rule for those who do not specialize in some certain type fishing where a 15 to 18 foot job is essential. With the 9 footer as a base, it is an excellent idea to carry several 2 to 5x tippets tied together for the quick emergency splice job—in a few seconds one can be ready with a 12, 15 to 18 foot length. A point not to be overlooked, too, is that leaders used with fan wings, some spent-winged and many large dry flies may need a rather heavy point in order to combat the additional air resistance associated with lures of that nature.

Eminent authorities in both spoken and written word will sometimes advise the use of a level leader on streamers for both trout and bass—often on wet winged flies as well. Some of these leaders are recommended in lengths as short as 7½ ft., but if pinned down the same fellow will frequently admit his personal preference for a taper, just a bit contradictory, the logical in the extreme when everything is considered. Top flight flymen generally agree that presentation is perhaps ninety per cent of the art and it is certainly easier for the average moderately experienced angler to lay out a fly nicely with a level leader. And there is a little room for argument as to whether it is preferable to lay out a nice fly with a level leader or a messy tangle with the taper. So the advice is well intended as far as it goes. But when the angler has progressed to the point where he can handle wets and streamers without difficulty on a taper, then he is adding just that extra touch of refinement that sometimes means the difference between a nice one or two and just an outing with a bit of fresh air.

Another angle to the taper or level controversy is the number of flies to be employed. Fishermen new in the game or of moderate experience generally like to have a lot of lures in the water. If three snelled wet flies are to be fished, then perhaps the level leader is preferable. But more and more anglers are finding it desirable to use only one fly on the cast and it is these ultra-purists that select the tapered leaders almost exclusively. These are the same fellows, too, who are taking more and bigger fish from under the very noses of less alert competition. On both wet flies and streamers, the writer, the veriest of dubs, likes tapered leaders exclusively, never anything less than 9 foot and seldom more than 14, tipped out to 3 to 5x for trout; to about 8/5 or 9/5 on bass. Tapered leaders are no more difficult to handle than level once the flyman adjusts himself to the rhythm of the cast.

Also to a great extent the make-up of the leader has a definite relationship with the rod and line being employed. In other words with a heavy 9 foot bass action rod and a level-D line, the leader butt should be about 018 tapered down to 010 in the three yards length on trout; 012 or 013 on bass. While not liking such a heavy assembly for trout, nevertheless I have tried one often enough to appreciate how it acts. In tipping out for a heavy 9 foot rod, bass action, I do not deem it advisable to go lighter than 2x or 3x. Exen with 2x a lot of dries will snap off on the back cast. The 013 tip will stand the gaff on the bass streamers and bugs.

The extremely light butt leaders and the 4, 5 or 6x tippets seem generally adaptable to the 7½ to 8½ foot rods and the usually recommended tapered line to balance. Of course, all of this depends a great deal upon the skill of the user. I have heard tales of a fellow living not so far away and said to be a successful dry fly man, who uses the old type knotless coil synthetic gut that washes out limp, ragged and waterlogged after a half hour or so of use. This man is supposed to tip out with Spanish gut. Just what the idea may be is obscure to the writer; I certainly would like to see it worked, still the source of my information seemed utterly unbiased and authentic. If an individual can rise above his tackle to such an extent, he is bordering upon what is commonly termed a maestro. What such a guy might be able to do with Spanish gut; well, there would almost have to be a law against it. The hitch might hinge on the term successful; at times during a furious rise trout may be taken on almost anything. The true test of the quality success is ability to take fish under average conditions with more than a fair degree of regularity.

There is just one more observation that might be added with a view of leader economy. It is a most sensible policy to carry spare strands in three or four sizes to match leaders in use, and especially the lighter diameters near the tip. I like 16 to 18 inch strands whenever possible to secure these lengths; it is always easy to snip off three or four unwanted inches, but one doesn't like too many splicing knots so necessary with short pieces. The leader should be examined after each trip for possible fractures close up to the knots, all doubtful connections being sheared off and retied without hesitation. Likewise the running portion of all strands, and especially the heavier three or four butt lengths, should be checked closely for possible mushy pulling apart of the fibres. Any leader is only so strong as the weakest link, and the very first cast on the next visit to the waterways might conceivably excite a rise from the all-time big one. As related earlier in this article the writer has been hopelessly and grievously nursing only memories of a tremendous old behemoth, due to a moment of carelessness; somehow or other there is a lurking suspicion I've had my chance and muffed it; I'll never connect with one like that again.

Accompanying this article is a sketch of some of the more approved gut knots. Several of the most useful are not too well known; the leader loop at the upper right-hand corner is a dandy for a streamlined job—the dropper loop at the lower left is a whiz. Every fiisherman should know all these knots at sight and practice tying them until so proficient that a job may be done quickly with almost frozen fingers and even in the dark.

Much appearing from the pen of the writer expresses the personal preference and experience of a groping fisherman though an ultra-strict user of artificials. And my written word is thoroughly selfish in that I would like to encourage more and more fishermen to adopt flies and plugs exclusive of all bait. To that end, anything I write even though mistaken and known to be cock-eyed by better informed anglers is deeply sincere—the suggestions are offered only to improve the game of another—if possible. When on the wrong track, I would be glad to know it. Far too many fellows, through no fault of their own, are discouraged at first with artificials. Too often it is due to poorly selected, unbalanced equipment, assemblies that would not work well even in the hands of a master. Yet it is true a few gifted individuals can rise above equipment at times and with sheer skill or the blessings of the gods make a satisfactory showing even with a jumbled, ill-assorted outfit—but with little or no fishing pleasure. There are certain fundamental rules governing equipment. A line might

well perform wonders on one rod; on another it is worse than useless. The same might be applied to leaders; the light butt is designed for a thin tipped line, a taper most likely; the heavy butt for the larger diameter line. Cross either and the assembly will be awkward; at least it is not likely to offer the utmost in fishing pleasure and finesse. To achieve the utmost, the whole outfit should balance. If a new rod is to be purchased, a line must be considered to bring out the proper action, the length, weight and intent of the tool all having a bearing. The finest rod is only mediocre if the line is not heavy enough to develop the inherent power; overload it too much and you'll soon be needing another stick. After the rod and line balance, to attain utmost efficiency then the leader is fitted to the combination. And all too often an otherwise fine assembly is spoiled by lack of leader harmony.

A safe and sane rule in general is "If you don't know tackle, know your outfitter". If you don't know the outfitter, a little judicious inquiry among stream wise fishermen will usually elicit reliable recommendations.

CONSERVATION TEACHING IN PUBLIC SCHOOLS URGED

One of the highlights of the Annual Meeting of the State Federation of Sportsmen's Clubs in Harrisburg on February 12 was the report of Robert W. Steventon, Chairman of the Committee on Conservation Education. Said Mr. Steventon:

This Conservation Education Committee has been doing its level best to have Conservation taught in the schools of Pennsylvania. Every contact the Committee makes is in favor of teaching Conservation. We face a problem that has not been solved, but we hope to solve; namely, What is to be taught and who will determine what is to be taught?

In a conference with the Department of Public Instruction held January 25, we found them to be in sympathy with our intended program. Yet, they did not care to take the step to determine what should be taught. They are very willing to put into operation any sound program or set of materials that may be presented to them.

The Committee on Conservation Education of the Federated Sportsmen's Clubs of Pennsylvania submits the following resolution on the teaching of Conservation in the teachers colleges and public schools of Pennsylvania:

WHEREAS, the welfare and security of America are basically dependent upon our ability to wisely use and conserve our natural resources; and

WHEREAS, we believe that through the instrumentality of our democratic educational system we can provide our people with the necessary power and desire to enable them to accomplish their objectives; and

WHEREAS, a survey of the teaching of Conservation in our teachers colleges and public schools shows that this phase of our education has been mostly neglected and is decidedly inadequate; and

WHEREAS, we feel that the subject of conservation is of such imperative importance as to compel the people of Pennsylvania to become acquainted with its various aspects and problems so that they might the more intelligently use and conserve their natural resources, among which are soil, water, wildlife, forests, minerals and plant life—aquatic as well as terrestrial; and

WHEREAS, it is universally recognized that education, to be most effective and productive, must begin with the child in the home and continue through the grade schools; and

WHEREAS, the findings of the Committee on Conservation Education of the Federated Sportsmen's Clubs of Pennsylvania show that the majority of our teachers are neither adequately trained nor properly equipped to teach Conservation from a comprehensive point of view, and as it is related to the social sciences as well as the natural; and

WHEREAS, there is sufficient factual evidence to show that the mechanical obstructions which may have formerly prevented the teaching of conservation have been removed, and that there is a desire on the part of the public for such education; be it

RESOLVED, that the Department of Public Instruction of the Commonwealth of Pennsylvania be requested to institute a course in Conservation in the curriculum of all the teachers colleges of this Commonwealth, the aim of the course being to prepare teachers for the teaching of Conservation in the public schools.

RESOLVED FURTHER, That the President of the Federated Sportsmen's Clubs of Pennsylvania forward a copy of this resolution to the heads of all civic and service groups, and request that they in like manner draw up and have approved a similar resolution to the effect that the Department of Public Instruction shall institute in the teachers colleges a course in conservation education, the aim being to prepare teachers for the teaching of conservation in the public schools, and have such resolution forwarded to the Department of Public Instruction and such other persons and departments as may be suggested by the President of this Federation of Sportsmen's Clubs.

RESOLVED FURTHER, That the Secretary of the Federated Sportsmen's Clubs of Pennsylvania be instructed to send a copy of these resolutions to the Governor of the Commonwealth of Pennsylvania, the Department of Public Instruction, the Department of Forests and Waters, the Board of Fish Commissioners, the Game Commission and all other Departments, Bureaus, Boards, officials and persons who may be of service in successfully accomplishing the objectives of the above resolutions.

BE IT FURTHER RESOLVED, That the President of the Federation of Sportsmen's Clubs of Pennsylvania, appoint a committee of three to confer with the Governor and express the wishes of this Federation in the imperative need of teaching the conservation of the natural resources in the public schools of Pennsylvania in order that the welfare of the citizens as a whole may be further insured against the destructive practices and traditional teachings of the past.

Therefore, as Chairman of the Committee on Conservation Education, I move that these resolutions be adopted and incorporated in the minutes of the Federation and that the Secretary of the Federation be instructed to comply with the provisions of these resolutions.

BOATING HAZARDS

During recent years this newspaper has had occasion to carry news stories concerning men who drowned while wearing hip boots in a boat comments the "Valley Daily News." In nearly every case the men could not swim.

It is extremely dangerous for any nonswimmer to use a boat where the water is deep. It is doubly so to run such a risk while in boots so heavy that they will fill with water and immediately take him to the river bottom in case of a mishap to the boat.

Those using small craft on river or lake should make sure that the boat does not leak, that it is fully equipped, and, if they are not unusually good swimmers, that they be wearing a life preserver jacket. Even the best of swimmers use light shoes for boating.

If such simple rules were followed, there would be fewer tragedies on the rivers and lakes of our nation.

Daniel Diez, Joe Busto and John Fury, all of Plymouth, paid fines totaling $350 plus costs after being caught with these 93 brook trout. They were arrested by Warden Russell Womelsdorf, and Special Wardens William Wasser and Creston Gallup on Bowman's Creek, Luzerne County, for having 63 trout in excess of the daily creel limit, and 63 trout under legal size. The license of Busto, an alien, was confiscated and the licenses of Diez and Fury were revoked one year by the Board.

LANCASTER DINNER ATTENDED BY HUNDREDS

Hundreds of Lancaster County's ardent sportsmen, representing twenty associations throughout the county, attended the first annual dinner of the Lancaster County Federated Sportsmen which was held at the Arcadia Hall.

The officials of the Garden Spot affiliates received many words of praise from Seth Gordon and Charles French, respective executives of the Game and Fish Commission, who were the honored guests at the dinner.

Both Gordon and French pointed out the value of unity in the field and stream sports, and while the latter delved into figures over a period of the past four years, the former spoke wholeheartedly on his pet subject, "Wildlife Refuges", showing their value to all who enjoy going afield.

Mayor D. E. Carey of Lancaster delivered the welcoming address and expressed his great pleasure in knowing that the county units have been united as one.

C. Allen Wiker, President of the Federation and Chairman for the banquet, acted as Toastmaster.

Chairman of the committees were: Ways and Means, Elmer Bomberger, Lititz Sportsmen's Association; Entertainment, Harry Marsh, Mill Creek Sportsmen's Association; Finance, Clayton B. Shenk, Lancaster Archery Club; Publicity, J. Earl Way, Hempfield Farmers' and Sportsmen's Association.

Sportsmen's associations which were represented were: Akron, Columbia, Eastern Lancaster County, Fair Play, Hempfield, Lancaster County Archers, Lancaster County Coon, Lancaster County Fish and Game, Lancaster County Sportsmen, Lititz, Manheim, Mastersonville, Mill Creek, Mt. Joy, Northeastern Lancaster County, Tri-County Fox Hunters, Paradise, Southern Lancaster County, Strasburg and West Earl.

Due to the great success of the first affair of this sort, the officials have definitely decided to make it an annual occurence and it can be expected that until another year the committee in charge will have to look for a much larger banquet hall, since practically every available space had been reserved for the inaugural dinner.

STATE CENTRE BANQUET HELD

Outstanding winter event of the year for members of the State Centre Game, Fish and Forestry Association of Philipsburg was the annual banquet staged on February 2 in the Parish House of the Episcopal Church. Capably presided over by Toastmaster Harry Weber, member of the Fish Commission, the dinner and program of talks by guest conservationists were keenly enjoyed.

Included in the highlights of the affair was approval by the Association of a mine sealing program to be conducted in Centre and Clearfield Counties, a report by Dr. Claude Gette on stocking activities of the game committee, a report by Charles Stoddart, Secretary of the Federated Sportsmen's Clubs of Centre County on advances scored in the membership drive, a talk by Dr. Logan Bennett of State College on research work being carried on to improve wildlife conditions by the Cooperative Wild-Life Survey, and by James Morton, Chief of the Division of Land Management for the Game Commission, on modern game problems.

The association's January meeting has been reported as follows by Secretary Maynard B. Henry:

The game committee reported that feeders were being placed, with all persons desiring feeders to contact Dr. Claude Gette, chairman of the Game Committee.

A report on fish feeding showed that 4000 trout which had been fed at the expense of the Association (Federal Fingerlings) had been stocked in December, having attained an average size of 5 to 8 inches. An additional 4000 are still retained in the Glass City Refuge rearing ponds, to be released as soon as they reach a suitable size.

The result of the rabbit stocking of the past season was also discussed, with a motion made and passed that the result be investigated and if satisfactory a similar project be instituted for the coming year. The findings showed that the project had been very successful, and an additional 12 dozen were ordered for stocking during February.

Minnow fishing produced this fine creel of brown trout from Wills Creek, Somerset County, last season for Ralph E. Barnett of Friedens. Largest brownie in the catch 15 inches.

The Association favored the raising of the bounty on weasels to $1.00, the bounty to be raised on grey and red foxes to stimulate trapping, and the protection raised on skunks or a bounty placed.

The Association also went on record against an open doe season which might be contemplated in the future.

It was voted to ask the Fish Commission for action to eleminate watersnakes.

MERCER CLUB ELECTS

The Mercer Rod and Gun Club, one of the oldest sportsmen's organizations in that part of the state, has organized for the 1940 season by the re-election of C. E. Ellis, president; Clifford Adams, first vice-president; Louis Coleman, second vice-president, (Leesburg District); Thomas Brazel, third vice-president, (Jackson Center District); A. L. Myers, secretary-treasurer; W. S. Moffatt, assistant secretary; C. A. Guiler, chairman; J. A. Adams, Mont Eastlick and John Reeher, executive committee, reports W. S. Moffatt, Assistant Secretary.

The Mercer Club mourns the death of its secretary-treasurer Ray C. Neuroh, which occurred several months ago. He was elected at the organization of the club in 1924, and served faithfully until the time of his death.

The club is preparing for its annual membership campaign, and anticipates a busy season.

Piney and Clover Creeks in Blair County furnished very good trout fishing last year, reports Warden Link Lender of Bellwood. Both are limestone streams and the splendid program of stream improvement carried on in these waters by the Williamsburg Sportsmen has paid fine dividends, according to Lender.

Carl Wertz, the Commission's photographer, snapped this unusual action photo at the Spring Creek Project last year.

This fine brown trout, 18¾ inches in length and weighing 3½ pounds was taken on worm last season in Little Conneautee Creek by Carl Hazen, Edinboro R.D. 4.

STREAM IMPROVEMENT IN FORBES STATE FOREST

By R. L. SMITH

Probably the most heavily fished stream n the Forbes State Forest is Linn Run in Linn Run Division. This stream is only 50 miles from Pittsburgh, running about eight miles down a narrow course hemmed in by heavily wooded steep mountain sides, having a fairly large watershed. It has three good-sized tributaries. The features, aside from heavy fishing, which led us to begin operations here, were somewhat unusual. To begin with a steep gradient of around four to six per cent is general, width ranging from 10 feet at its head to 30 or 35 feet at Rector. This stream rises very quickly and falls just as fast. One record after a heavy summer storm shows a rise of seven feet in five minutes. The stream normally is wide and shallow and the quick runoff does not help conditions. In the summer it drys up badly, forcing the trout into the none too numerous pools. This condition lasts to late fall until the rains and snows fill it.

Summarizing the bad features we find there is a too quick run-off, lack of deep pools, and well defined courses. There are, however, adequate gravel beds, food and cover.

Since the Fish Commission and the Westmoreland Sportsmen's Association have been stocking this stream and regulating fishing it was decided that we should do our part. Making use of the facilities at hand, a WPA project was drawn up and approved. Under the plans and supervision of the Foresters, stream retard construction began in the early sumer of 1937. The device most frequently used was a simple log dam. A stick of good water resistant wood, principally oak, about 20 feet long, 24 to 28 inches in diameter was cut, then pulled by tractor to the dam location where four-foot ditches were cut in each bank from the bank top to a point about five inches below water line. The log was placed across the stream, fitting snugly into these ditches. Four locust posts five feet by four inches were driven in at each end of the log in pairs, opposite each other. A good grade of one-eighth inch annealed, galvanized wire was wrapped tightly around and over the logs and around the posts, stapled fast by barbed staples. The log was imbedded in the stream bed four to five inches. The log was covered over in the ditches with stone and earth and the banks riprapped five feet on each side of the log. If one log was not high enough another was placed directly on top of the first, the two joining sides hewn flat.

These were spaced at intervals governed by absence of natural pools and need for retarding runoff. The upstream side of the dam quickly filled in, as would be expected but after several periods of high water and storms excellent pools were gouged out directly below each dam.

These pools have already and will retard the runoff and form havens for trout in dry seasons. Observations show good results in this short time and trout counts at these pools show their approval Exceptional care was taken to make the structures stand terrific battering and last indefinitely.

Where good stone was available stone dams were used, but this was infrequent due to increase of expense of construction. Stones averaging three feet by three feet by two were arched across the stream. The arch pointing upstream. The middle stone acts as the key. Ditches were used the same as in log dam construction. The stones were dressed just enough to make a good fit. No cement or mortar was used.

Only one other device was decided necessary to make a good job, namely a deflector. Two types were used, single and V-type. They were constructed of the same material as log dams. Single deflectors were used in protecting banks on curves and directing the water in various places to obtain pools. A log 10 to 12 feet long, 24 inches to 28 inches in diameter was placed at a 45 degree angle, from one bank extending halfway or a little better across the stream. The same system of posts, wire, ditching as in dam construction was used, except there was added a brace perpendicular to the deflector on the downstream side extending from the middle to the same bank and set in a four-foot ditch. Pools of all sorts were made this way by directing water to rocky areas, under stumps and trees, etc.

V-type deflectors were simply two single deflectors placed opposite each other and proved successful in making a deep, narrow channel where formerly there was only a very wide, extremely shallow stretch, too shallow for trout to move across.

As yet it is too short a time to make a definite statement on the success of this work. However, every indication thus far has shown favorable results of the project.

It is impossible to give too much study and care in planning stream improvement. Each stream differs within different parts of itself.

Everything must be considered, even so far as taking care not to raise the temperature of the water too much by dam construction or creating a flood condition.

The cost of this work to the state was very low and within every Forester's budget. Records show log dams cost on an average five man-days plus tool depreciation, wire, staples, tractor and timber, or about $25.00 complete. Stone dams run much higher, requiring ten man-days to install. Single deflectors use four man-days and V-deflectors six. On the Forbes State Forest, where WPA supplied the labor, the cost to the State was very low. The cost of the timber was negligible, the highest contribution was the tractor. Three axes, one crosscut saw, one sledge hammer, two canthooks and two log carriers made up the small tool list. The quantity of wire and staples used is surprisingly low. Thus under the present WPA requirements any Forester can readily carry on the sponsor's contribution of the project with little monetary outlay.

Aim high, but don't stop shooting just because you missed the first few shots.

Tobyhanna Creek in Monroe County yielded this fine combined creel of brook trout, 8 to 12 inches in length, to Andrew Goula and William Wargo of Dupont, Luzerne County one day last season.

HERE AND THERE IN ANGLERDOM

The following splendid report on results of the watersnake campaign conducted last year by the Huntingdon County Game, Fish and Forestry Association, Inc., has been submitted by Howd Shilling: During the current contest period that came to a close on September 30, 1939, the Contest Committee records show that 683 watersnakes were presented for bounty payments. The Committee paid a bounty of five cents for each watersnake presented at the several "checking stations" and, in addition, the Committee will award prizes for the high "individual kills", as follows: First prize, Ralph Lane, Three Springs, for 130 snakes; second prize, Glenn Wasson, McConnellstown, for 119 snakes; third prize, Harry Varner, Huntingdon, R.D. for 104 snakes. Since introduction of watersnake control contests by the Association in 1935, the annual results have been as follows: 1935, bounty paid on 624 snakes amounted to $31.20; 1936, bounty paid on 390 snakes amounted to $11.70; 1937, bounty paid on 259 snakes, $12.95; 1938, bounty paid on 1586 snakes amounted to $79.30. Including the 1939 total of 683 snakes amounting to $34.15 in bounty. The campaigns conducted have resulted in removal from fishing waters in Huntingdon County of 3542 watersnakes for which a total bounty of $169.30 has been paid. This is one of the finest reports on constructive club activities in bettering our fishing that it has ever been the privilege of the ANGLER to publish.

Fishing Creek in Columbia County yielded this 21¾ inch brown trout to William Johnson of Berwick last season. It had a girth of 13 inches and weighed four pounds.

An ardent plug fisherman, favoring light lures, is Dr. J. L. Ridinger of Jeannette, who writes concerning October fishing: "The largest fish to be reported was a carp. All fish were taken on plugs, I use nothing else. Through the summer I also caught two other carp, a catfish and bluegills, and perch on plugs. Some of the ideas you publish in the ANGLER were used to good advantage. I used smaller plugs, a gut leader from 10 to 15 feet and fished them slower than ever. (water mostly low.) The fisherman's barometer and solunar tables were followed religiously and, regardless of some articles I read opposing them, feel that they were right practically all of the time. While I know of many fishermen who had poor luck last year, it was the best year I ever had (in 30 years of fishing). I must hand out the credit somewhere. Was out a couple of times when the line froze to the guides even while reeling in and I never had a strike. One morning (October 18) I had this experience. I waited until the sun started to work, pushed the boat out through 15 feet of thin ice and plugged hard and carefully for hours to prove or disprove whether fish would hit under these conditions. About two hours after all ice was gone (11:30 A. M.) they started to hit and I had the limit before 4 o'clock. All were bigmouths over 12 inches (my personal limit). On October 25, it was cold, dreary with a strong southwest wind. My buddy and I caught four bass, all over 15 inches. I hooked a carp that day, considerably larger than the one in the picture but it got away from us at the net. Had a hard time raising it at the boat when it got under. After I succeeded in working it out from beneath the boat, we saw what it was but it got away".

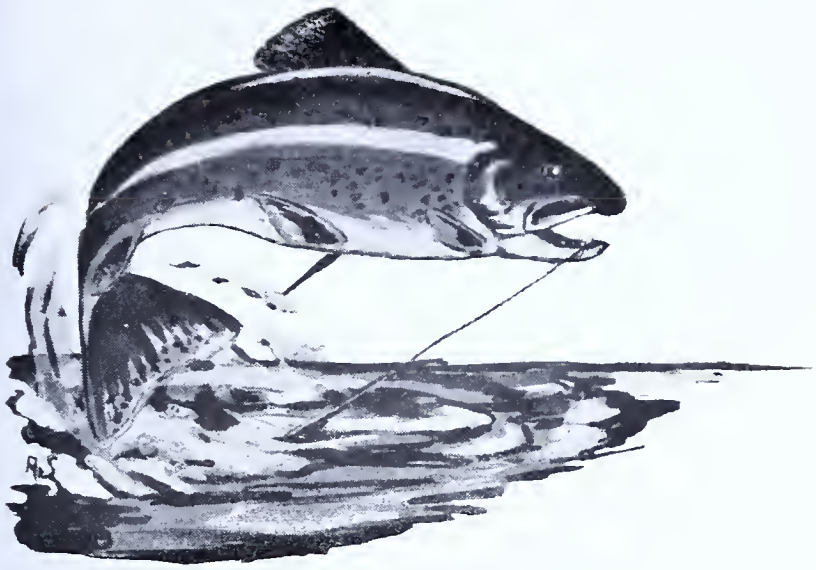
An optimistic picture on the trout outlook in Clinton County streams is painted by Warden George Cross of Hammersley Fork. "Relative to the dry spell we had in northern Pennsylvania last fall", he writes, "we didn't lose too many fish as the trout seemed to gather in pools and apparently seemed to get through all right. There is no question, however, that we lost a lot of fish food and minnow life owing to drought".

Speaking of catches of bluegill sunfish, that scored by Thomas Gathers of Sharon and Elmer Garett of West Middlesex in Camaugh Marsh last season was exceptional. Their hefty catch of sunnies, 19 in number, ranged in length from 7½ to 9 inches and was made on garden worms. Thirteen sunnies, 7½ to 9 inches, were taken by Gathers and John Ray on another occasion last season.

Apropos of trout fishing, we quote the following interesting letter from H. C. Thompson of Williamsport: "I belong to a hunting and fishing club which has a cabin on Pine Creek above Slate Run, Lycoming County. We fished both Slate Run and Cedar Run considerably after they were made restricted streams. These projects converted many of our members to becoming fly fishermen and also prompted them to fish for a few large fish in other streams instead of the limit of any size legal trout with bait as had been their habit in the past. Fishing was wonderful in 1936 and '37 on these streams but tapered off in 1938 and was terrible in 1939. Hikes after the close of the 1939 season showed few fish in the main streams but the closed feeders were full of very nice trout, both brook and brown. These streams were well patronized the first three years but during the last season, few fishermen were seen. Am in favor of a later opening date for all trout fishing but retain the closing date as is. Not many trout are taken in July but a few dyed-in-the-wool trout fishermen like to fish and experiment on the streams when most fishermen are after bass".

And this fine report from Park Campbell, ardent angler and conservationist of Millersburg: "I had some good bass fishing the past season but failed to land a big one. Used plugs and streamer flies and, at times, because of water conditions, live bait on a fly rod. Killed 39 bass all over 10 inches in length and released many smaller ones".

John Horkins of Philadelphia scored this fine catch of trout in Valley Creek on the second day of the season last year. Largest trout in the catch measured 18 inches.



BLACK MOSHANNON

by

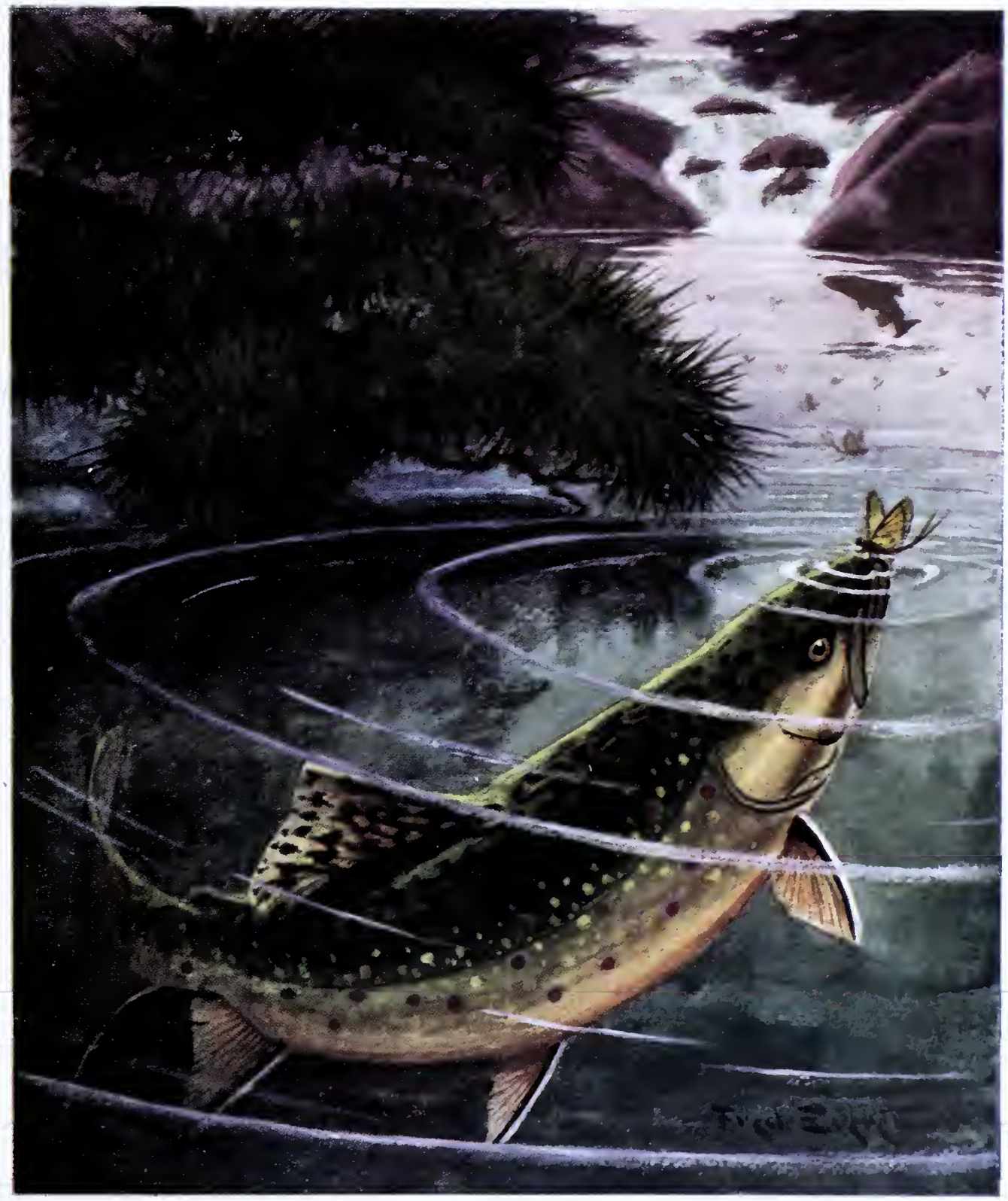
A. G. SHIMMEL

In the swamp among the aspen
Beaver dams and beaver houses,
Sunken logs and vegetation,
Stain the water amber color,
At the head of Black Moshannon.
Down it flows between the mountains,
On its banks the towering hemlocks,
In the shade the rhododendron
Flaunt their white and tinted blossoms,
Mirror them in placid water.
There it rests, then plunging downward,
Swirls and roars among the boulders.
Here and there a sand spring mingles
Icy water, clear as crystal
With the foaming darker water.
White tailed deer hide in the laurel,
Bob-cat tracks show on the sand bar,
And occasionally an otter
Hunts the winding water-courses.
These and many smaller creatures
Make their homes among the mountains.
From the fire-scarred pine, the osprey,
Keeps his watch o'er pools and rapids,
Brown trout hide beneath the log-jams.
In the riffles, brook and rainbow
Take their toll when ephemera
Dance at evening on the water.
On the banks grow the carnivorous
Pitcher plants and tiny sun-dew.
Here too grow the dainty orchids,
And the water honey-suckle.
In late summer the lobelia
Cardinalis, dot the margins,
With their brilliant scarlet candles.
Here the mottled timber rattler
Waits his prey among the shadows.
Stream of many moods and fancies,
Guarding carefully its secret,
Mid the Pennsylvania Mountains.
Indians named it Waw Moshannon,
"Laughing river of the black moose".

IF YOU WOULD
CATCH MORE TROUT . . .

Kill Less!

PENNSYLVANIA ANGLER



BROOK TROUT

APRIL, 1940

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Vol. 9. No. 4

PENNSYLVANIA ANGLER

APRIL 1940

SPRING DISTRIBUTION OF TROUT

WITH our fleet of thirty-six trucks on the road night and day, we will have most of the trout streams stocked prior to the opening of trout season, April 15th.

Normally, 75% of the stocking would have been completed by this time, but unfavorable weather and water conditions have completely upset our program this year.

The records show that in the past twenty-five years, our trout streams were never as low as last fall. Some of the streams the Fish Commission classed as major trout waters were so low that it was considered too dangerous to stock.

Normally, spring distribution commences the latter part of January, but with the very heavy snows, hundreds of roads leading into streams were impassable, and therefore early stocking was impossible.

Our distribution program has been under way since the first of March, and we are faced with a mammoth task of distributing over 700,000 trout in six weeks time.

Many streams will not be stocked prior to the opening of trout season, as roads leading to them have at the present six to eight feet of snow, and we don't believe this will be gone in time to get our trucks to the streams by April 15th.

We sincerely appreciate the wonderful cooperation we have had from hundreds of sportsmen's groups throughout the State, as they have been of great help in our stocking program.

C. A. French
Commissioner of Fisheries

Trout Forage Common To Pennsylvania Waters

By W. R. WALTON,

Senior Entomologist, Bureau of Entomology and Plant Quarantine,
United States Department of Agriculture

"ALL flesh is grass", the Prophet Isaiah tells us but this assertion is quite as true of the fishes as of man and the terrestrial mammals.

Water-dwelling plants form the original source of sustenance for all game fishes, even though most of these receive this nourishment second-hand; in other words after the vegetable matter has been converted into flesh by the zooplankton, or minute crustaceans and insects of stream and pond.

Evermann and Clark (1) found that a few of the game fishes, such as the bluegill sunfish, feed at certain seasons directly on the tender portions of water plants. Likewise, Dr. Paul Needham (2) found vegetation in the stomachs of rainbow trout so frequently that the he leaned toward the idea that this was taken voluntarily rather than incidental to the ingestion of creatures dwelling on such plants. Nevertheless, it is abundantly evident that to the majority of the game fishes the minute living creatures of stream and pond, such as the water fleas, crustaceans, insects, and small, coarse fish, are both meat and bread.

With this fundamental fact in view it becomes perfectly apparent that water conditions unfavorable either to aquatic plant life or to the small creatures dependent upon it, and upon which the trout subsist, should concern seriously every Pennsylvanian who loves the incomparable sport of angling. Apropos of this, there is every reason to fear that the protracted drought of the summer of 1939 may have so depleted many of the trout waters of the state of their fresh forage as to lower their trout carrying capacity seriously, perhaps for some time to come.

Although it is true that many kinds of aquatic insects possess marvelous powers of survival because of their enormous powers of reproduction and may thus overcome difficult environmental conditions, this is by no means true of all of them.

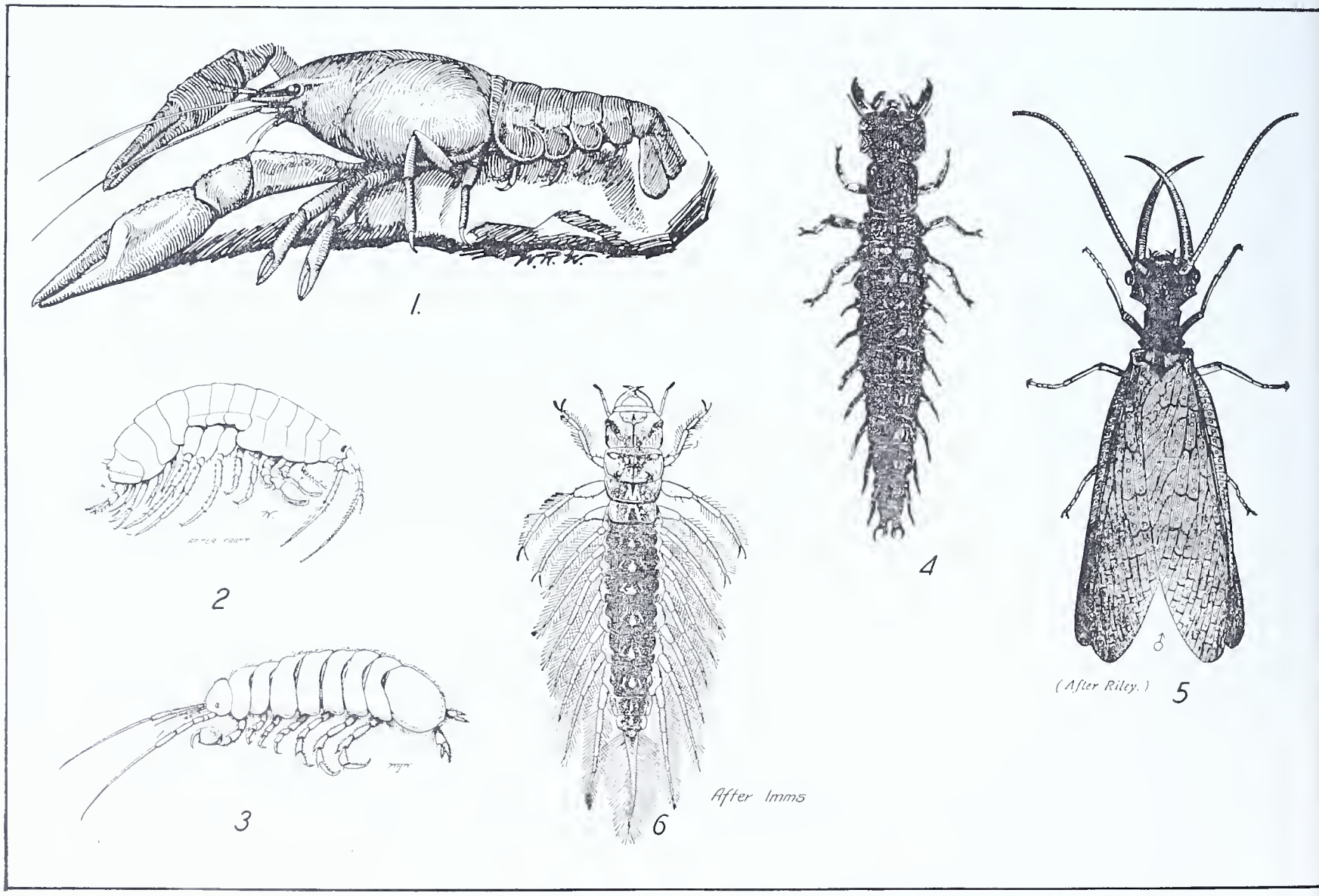
Some of these insects, like the smaller crustaceans, are fitted by nature for survival only in cold or at least moderately cool water and perish like the trout when its temperature rises beyond their power of endurance.

On the other hand, the crayfish can withstand great changes in temperature and, furthermore, will migrate overland at night from pools that become unbearably warm or lacking in nourishment.

Since it is apparent, from what has been said, that natural trout food in many of our streams may be in a greatly depleted state every trout fisherman who has the welfare of the sport at heart will resort to artificial lures rather than be guilty of further reducing the breeding stock of trout food by using it as bait. Where it becomes necessary to resort to the use of a natural bait the ubiquitous and ever present earthworm or "garden hackle", is practically always available during the trout season and is never in danger of extinction.

Remember, for instance, that it takes almost three full years to produce a full grown helgramite and furthermore that man and the fishes are not this vigorous creature's only enemies, as will be explained later.

The following brief account of some of the principal creatures that constitute the forage of trout is presented with the hope that it may stimulate interest in the natural history of these creatures and assist those anglers who are interested in fish conservation to improve the trout-carrying capacity of their favorite streams by conserving these creatures that are so important to the welfare of the trout.



Trout Food in General

Although it is known to fish culturists that trout kept under artificial conditions can subsist on a considerable variety of animal food, studies both quantitative and qualitative made in typical trout streams in this country by Dr. Paul R. Needham [2] and others have demonstrated that by far the greater bulk of the food of wild trout consists of subsurface aquatic forms of animal life. Of these the most important were the nymphs, or larvae of caddis flies, may flies, and two-winged flies, or Diptera.

The species of fish studies were the brook, brown and rainbow trouts, respectively. With the rainbow, no less than 93 percent of its food consisted of the insects mentioned. The brown trout was next, with 91 percent of such food, and the brook trout last, with 66 percent. With these facts in view it is easy to understand why the use of artificial nymphs, by well-informed fishermen in the early season, has become so popular in recent years.

Dr. Needham's studies very properly were conducted in such streams as were fully suitable for the permanent residence of trout and show most admirably the character of food consumed under these conditions. When, however, adult trout are stocked in streams that contain insufficient sub-surface insect and other life, they feed on any floating food available. In making this statement I have in mind a beautiful woodland stream of cool, clear water, fully ten miles of which has a shifting, white-sand bottom. This brook is totally devoid of small fish life, supports practically no submerged plant life, and contains very few subsurface insects. In order to supply at least some fishing for local urban enthusiasts, a charitable State Fish Commission stocks it each year with limited numbers of adult trout. Fish taken from this stream by the writer contained such poor forage as numbers of adults of the larger whirligig beetle *(Dineutes)*, water striders *(Gerris)*, and even May beetles *(Phyllophaga)*, that had fallen from trees overhanging the stream. In other words, like human beings in similar circumstances, when hunger urged, the trout ate any food available. This fact was further emphasized in my experience by hauling a one pounder out from under a submerged brush pile and finding in its stomach a half-grown short-tailed field mouse *(Microtus pennsylvanicus)*.

In fact, the versatility of the trout as a trencherman has become too well known to fish culturists to be at all disputable. Adult trout in captivity are now fed wholesale on cooked, canned fish, liver and cereal mush, and thrive on this unconventional food. It may truthfully be said, however, that such fish furnish poor sport and even poorer eating until they have been permitted to range the streams for a period and thus become properly conditioned on their natural forage.

Crustaceans

The crustaceans, or crablike animals, form a very important portion of the food of trout in many streams of Pennsylvania. Of these the crayfishes are best known to anglers, not because they are most numerous but rather owing to their large size, which renders them conspicuous. The smaller crustaceans, however, such as the scuds, water sowbugs, and shrimp, are far more numerous and furnish much more abundant food in waters suited to their existence.

The crayfish is known under various local names, including crayfish, crawdad, and simply as crab in some communities. The species most commonly found in trout streams is the smooth-shelled crawfish *(Cambarus bartoni)* (Fig. 1; about natural size), which likes to make its home under rocks in the somewhat quiet pools of cold streams but which can exist in almost any waters of ordinary temperature. It is partial to streams having a high content of lime and is known to mate and spawn all the year round. Its eggs are carried on the slender leglike swimmerets under the tail and the young when hatched attach themselves to these appendages. They are thus transported for about a week, after which they are compelled to shift for themselves and may become fair prey for small trout and other fish.

The larger crayfish are freely eaten by the big trout, which capture them at night when the crustaceans leave their burrows to forage for food.

The mud chimneys, or towers, often observed in the soft banks along streams are made by a quite different, large crayfish, *Cambarus diogenes*, so called because it lives alone in its burrow for most of the year. It is not of much importance as food for fishes.

The crayfish, like the insects, can make space for its growth only by shedding its hard shell at more or less frequent intervals. At such times it becomes wholly defenseless and would become instant prey to the fish were it not for hiding in its burrow until the shell hardens.

Such soft-shelled crayfish are highly effective bait for game fish, and anglers often inquire whether this soft condition of the shell can be produced artificially. The answer is that it cannot, but where crayfish are furnished with abundant food and grow rapidly they shed their shells most often.

Crayfish are most carnivorous and, although scavengers by nature, will devour any living creature they can overcome, including smaller crustaceans, insects and fish. It therefore is probable that they take their toll of trout fry where opportunity offers. However, the big trout in turn devour the larger crayfish and thus follow the rule described by Dean Swift in his oft misquoted verse:

"So naturalists observe, a flea
Has smaller fleas that on him prey;
And these have smaller fleas to bite 'em,
And so proceed ad infinitum.
Thus every poet in his kind
Is bit by him that comes behind".

In cold streams rising from limestone springs, such as many of those in the Cumberland Valley, the trout have abundant, rich food in the shrimplike creatures commonly called "Scuds" or "fresh-water shrimp" although they really are not true shrimp. Another common name for these little creatures is "spring keeper", that is to say, guardian of the spring, from the idea that they preserve the water from pollution. However, scuds feed entirely on rooted water plants such as watercress and sometimes are present in astonishing numbers. Dr. Paul Needham [2] tells of finding no less than 5,000 of these little crustaceans in a single square foot, in the center of a bed of watercress.

The largest of the scuds belong to the genus *Gammarus* (Fig. 2; enlarged about 3 times) and may become nearly an inch long, but most of them do not much exceed one-half inch.

According to Dr. J. G. Needham [3] the possible progeny of a single pair of scuds may exceed 24,000 annually but he considers this a low rate of increase as compared with that of many insects.

The scuds carry their young about with them after hatching, in a brood pouch concealed under the chest, until they are well able to care for themselves, and a fresh brood occurs every 6 weeks in summer. Scuds are generally absent from streams that do not contain abundant plant life and they quickly succumb when exposed to high temperatures. Scuds swim well and swiftly, often on their sides, from plant to plant, and thus frequently become the prey of trout, from small fingerlings to pot-bellied lunkers. They are gray, greenish, or yellowish, and one cannot easily see them by gazing at the surface of the water.

Other common crustacean inhabitants of watercress beds are the water sowbugs of the genus *Asellus* (Fig. 3; enlarged about 2 times). These have much the same food habits as the scuds but are somewhat addicted to decaying as well as living plants. They live in quieter waters and are grayish, flattened creatures much like the ordinary land sowbugs seen so often hiding under boards on the surface of damp soil. Those living in the water, however, are more hairy, larger, and have the front two pairs of legs fitted with claws for grasping. They dwell among the plants on the oozy bottoms of spring pools and are said by the Needhams to be excellent trout food. In witness of this fact, the fattest and heaviest trout for its length ever taken by the writer came from a commercial watercress bed that contained literally millions of water sowbugs. The stomach of the trout was full of them and its flesh approached in color that of the Atlantic salmon.

Insects

As has been previously shown and as all observant trout fishermen know, the greater proportion of food taken by trout consists of insect life that originates in the stream.

The kinds, or species, of insects eaten necessarily varies considerably with the character of the stream inhabited. Cool streams, ranging in temperature from 50° F. in winter and not to exceed 65° F. in summer, having rocky or gravelly bottoms and supporting abundant submerged plant life are almost certain to teem with insect trout forage.

Conversely, streams bottomed with shifting sands and containing little plant life, no matter how clear and cool they may be, are invariably poor in submerged insect life.

Until the publication of the quite competent studies by Halford [5] in Great Britain, little, definite or accurate, was known about the identities of insects eaten by trout, although Ronalds [6] as early as 1856 had endeavored to elucidate the subject. Similar studies, much more extensive quantitatively and vastly more so geographically, made in this country by the Needhams and others during the last 25 years have amply confirmed the findings of Halford.

Recently statements have gone the rounds of the public press to the effect that the trout

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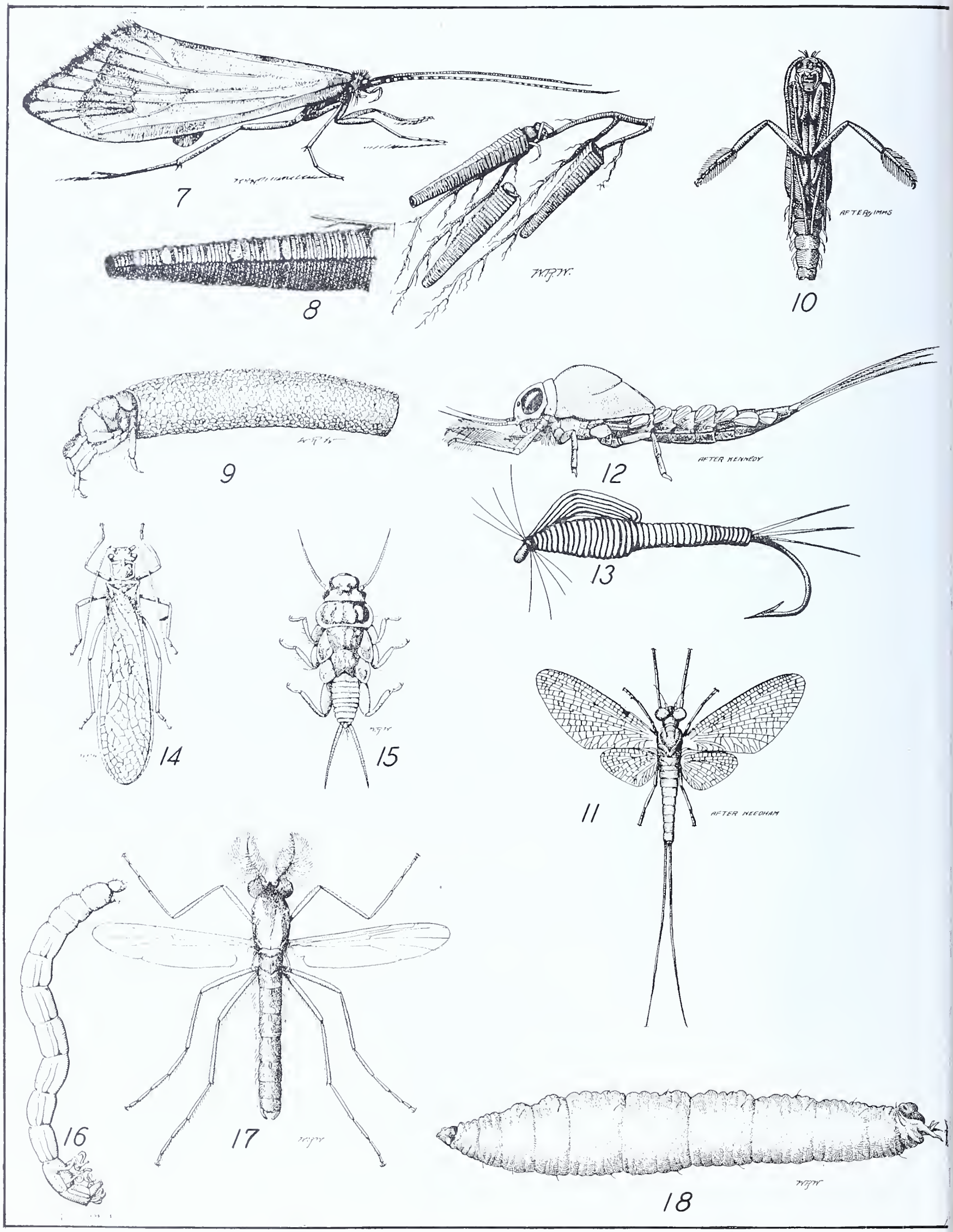
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orage insects of this country are so different n species and appearance from those of Britain that totally different artificials must e tied to be successful here. Such stories hould be taken with at least several grains orage insects of this country are so different f salt because the truth is that not only re some of our trout insects identical with hose of England but most of the remainder f them are so similar in appearance that nly the entomologist with his microscope can listinguish them.

Had trout such exquisite powers of discrimination as is alleged, they never would e caught on such universally successful, but ntomologically impossible, artificials as the Royal Coachman and Silver Doctor.

The most important insects included in the menu of trout belong almost entirely to a group known entomologically as the *Neuropteroid*, or net-veined insects.

The biggest of these and the one most generally known, in its larval state, to fishermen is the helgramite *(Corydalis cornuta)* Fig. 4 and Fig. 5; about natural size). The eggs of the helgramite are laid in masses on rocks and leaves overhanging streams and look quite like splashes of whitewash. According to Dr. L. O. Howard (7) the eggs are commonly parasitized by an anthicid beetle which destroys them wholesale. Thus the war on this useful creature begins early and is continued unremittingly by man and the fishes throughout nearly three years of larval life. The adult male, shown in Figure 5, looks ferocious but the big jaws are harmless and used only for grasping the female at mating time.

The helgramite has more aliases than a Chicago crook and, according to Prof. W. H. Bailey of Brown University, is known by no less than sixteen names in the State of Connecticut alone. Among the more euphonious of these are conniption bug, clipper, water-grampus, gogglegoy, hell devil, ho-jack, dobson and bogart.

Although the helgramite is used more frequently as a bait for bass, it lives abundantly in some trout streams and is quite popular there as bait for large trout. In fact, almost any fish capable of swallowing it will accept this luscious creature when offered on the hook:

The angler knows, when the fish won't bite,
And if flies don't lure 'em, the helgramite.

This insect is unknown in Great Britain, where its place is taken to some extent by a much smaller insect that has been called the alder fly, *Sialis lutarius* (Fig. 6; about twice enlarged). The American species of this genus resemble those of Europe so closely as to be easily mistaken for them. The larvae of the alder flies live in quiet water, partially submerged in the mud and silt, whereas the helgramite can exist only in swift, well aerated water.

The caddis flies (Fig. 7, enlarged about five times) or, rather, their larvae, the caddis worms (Fig. 8 and Fig. 9; considerably enlarged) are the bread and butter of the trout. In fact, Paul Needham found that their larvae and pupae were the first choice of trout as forage, during seven months of the year.

Caddis worms and their cases vary greatly in appearance but in general they belong to two groups having diverse habits. One of these builds a stationary nest where it spreads a net across the current to catch the minute things upon which it subsists. The other group, and one very important to the trout, constructs a portable case which is dragged about with the insect, somewhat like the shell of the snail. In fact, some caddis worms (Helicopsyche) build spiral cases out of tiny pebbles that might easily be mistaken for those of a snail.

Among the commoner of the roving caddis worms are those shown in Figures 8 and 9, belonging to the genera *Psilotreta* and *Brachycentrus*, respectively. These kinds inhabit swift water and are swallowed by trout in great numbers, case and all, especially during April and May.

The cases of caddis worms are made of silk and covered with all sorts of indigestible objects such as sand grains, pebbles, twigs, leaves, and small shells, but these merely form healthy roughage for the trout.

When about to pupate, the caddis worms fasten their cases to some rock or, as in the case of *Brachycentrus* (shown in fig. 8), to the submerged roots of a tree. When the pupa emerges from its case to rise to the surface it is equipped with a pair of long, oarlike legs (Fig. 10) which enable it to swim swiftly to the surface, where it sheds its skin and becomes an adult, like Fig. 7. At such times, or as the fishermen say during a "hatch", the trout feed wildly and may be caught on any artificial that resembles the caddis fly.

Most caddis worms are vegetarians but some are carnivorous and even cannibalistic and will eat even their own kind.

Until recent years most artificial flies were patterned largely after the adult May flies or *Ephemeroptera* (Fig. 11), but the anglers have learned that those resembling their nymphs, or immature forms, are deadly indeed especially early in the season.

The kinds of May fly nymphs are much too numerous for discussion or even mention here and live under many conditions, in all kinds of waters. Some of these, such as *Hexagenia* and *Ephemera*, burrow in the mud in quiet waters, but the most important to the trout are such neat, streamlined forms as *Baetis*, *Stenonema* and especially *Isonychia* (Fig. 11 and Fig. 12; considerably enlarged). These live in swift water where they swim about freely, constantly exposed to the appetite of the fish. Their locomotion is accomplished by oarlike movements of their gill members and tails and they form the "roast beef" of the trout, as they are eaten in enormous numbers.

As May fly nymphs subsist entirely on microscopic plant life such as diatoms and the low algae, they are especially valuable in their function of converting vegetation into nourishing trout forage.

The nymph shown in Fig. 12 is redrawn from Kennedy and illustrates a form often called the "howdy" because it sits with its head upstream, with arms, or fore-legs, extended as though in greeting. These legs are fitted with a basket of long, closely-set hairs which form a trap for the minute organisms that are its food.

The hump-backed artificial (Fig. 13) shown beneath the nymph is evidently intended to represent the howdy or its near relatives and is one commonly seen among the tackle dealer's stock. The transformation of the May fly is unique among insects, for, after shedding the nymphal skin and becoming a winged creature, it rests for a short period and again sheds a complete skin before being able to mate and lay its eggs. The first winged form is known as the subimago and, according to Halford, these are the prototypes of the numerous "duns" of English fly fishermen. The perfect adults, or imagoes, are imitated by the so-called "spinners" of British fly fishermen, although this term is applied to imitations of the crane flies by American writers. Some May fly imitations are fairly close to nature, especially those known as "detached" flies having the body free from the hook shank except near the eye. The entomologist, however, can scarcely suppress a quiet grin when told that the well-known pattern "black gnat" is an imitation of the flies of the genus *Bibio* or, worse yet, as Ronalds alleges, a dipterous fly of the genus *Rhamphomyia* of the family *Empididae!* The truth is that they look about as much like these insects as a dog looks like a turkey.

Fig. 11 shows the adult or imago of the howdy, *Isonychia* with its wings fully spread and enlarged about three times. May flies vary in color from yellow, through pale green and gray, to brown. They live as adults for a very short time and take no food during this period.

Another group of aquatic, net-veined insects eaten by trout, but of much less importance in that respect than the foregoing, are the stone flies. Figure 14 shows the adult of one of the largest species inhabiting Pennsylvania. This is *Pteronarcys* (about natural size), and the salmon flies of the Pacific Coast belong to this genus. A nymph of the similar genus *Perla* is shown (enlarged about twice) in Fig. 15. These nymphs live a roving life but mostly hidden under rocks and in crevices where they are not frequently available to the fish as food. It is said by Halford that the artificial commonly called "Yellow Sally" is patterned after a stonefly of the genus *Chloroperla*. If one has a good imagination, or perhaps a disordered one, this might be believed.

Early season trout fishermen are sometimes astonished to see a small, dark-colored stonefly emerging briskly in numbers from the icy waters and resting on the snow banks that sometimes border the streams on opening day, and, alas, often later. This hardy little insect, sometimes called the "snow bank", is *Taenioteryx nivalis* of the entomologist.

Unlike the adults of most net-veined aquatic insects, the stoneflies have well developed mouth parts and are known at times to feed extensively. Thus the species, *Taeniopteryx pacifica* Banks was reported in the spring of 1934, by J. C. Evenden of the Federal Bureau of Entomology and Plant Quarantine, as seriously defoliating elm and cottonwood trees in the city park at Coeur d'Alene, Idaho.

The two-winged flies of the order *Diptera* are rated third in importance as trout forage by students of this subject, and these flies are present in considerable variety in most trout streams.

The most numerous and by far the most important of these are the larvae of the midges known entomologically as *Chironomus*. These are of many species but they closely resemble one another and both larva and

(Continued on Page 28)

NOTES FROM A FISHERMAN'S DIARY

By CHAS. M. WETZEL

FOR THE PAST TEN YEARS I HAVE been keeping a diary of all my fishing trips, and the following accounts appear exactly as they were originally written. I have picked out those entries which I thought to be the most interesting, without regard to the year, but the dates are in all cases given. After all dates are the most important.

Year after year, certain flies appear over the water, and always at practically the same time. Weather conditions may influence their arrival somewhat, being hastened by heat and retarded by cold, but in general the period of emergence should not vary by more than ten days or two weeks at the most. This is for extreme temperature variations. In the usual case, one can calculate the emergence date to within three or four days; and in many cases, they appear year after year, exactly on the same day.

A record then, of trout fishing trips extending over a period of years, should prove valuable, since, by reference to the notes, one can anticipate the fly that will probably be found over the water at certain times.

April 13

Spent the evening tying Red Quill nymphs and wet flies, also a few Little Black Stone flies. Tomorrow night I am going home to fish with Dad on the opening day, and the Red Quill should prove A-1. A few years ago I took 9 trout on Young Woman's Creek with the Red Quill, and I'm hoping that I'll be able to duplicate that performance on the opening day.

April 15

Dad and I fished Swift Run above Troxelville, Snyder County, today. Weather very cold with occasional snow flurries. Stream very high. A few Little Blackflies over the water, but the Red Quill was conspicuous by its absence. Both Dad and I fell in, and our clothes were frozen stiff before we arrived home.

April 22

Clark Kepner, his son Allen, and I fished the Yellow Breeches at Huntsdale, also Big Spring at Newville. Water temperature 45 degrees, and trout very sluggish. Only saw three trout caught all morning. In the afternoon, "Kep" and I went to Fishing Creek in Lancaster County where we caught three trout. The Little Black Caddis, as well as the Red Quill were out in fairly good numbers on this stream, and their imitations were responsible for the fish above mentioned. Fished wet flies, using the Red Quill on the point.

April 30

Dad and I fished the North Branch of the Middle Creek today. Weather rather cold, with rain in the morning, but towards noon, the Black Quill began to appear over the water. Immediately the trout started rising, and in a short time I took five nice fish. The trout though were rising to the Red Legged March Fly which was everywhere struggling on the surface, and it was this imitation that was responsible for the taking of the fish. These flies belong to the family *Bibionidae*, genus *Bibio*, and apparently do not rise from the water, since I have seen many crawling out of small holes on the clay banks of the stream. Having no monograph, I am unable to identify them as to species, so am sending a few to Mr. Cresson of the Academy of Natural Sciences. (1) When opened, the stomach contents of these trout revealed an amazing quantity of these flies.

May 1

Jack Fetterholf and I fished the North Branch today. No luck, yet there was an abundance of flies over the water. Hundreds of Light Stoneflies and Alder flies were congregated on the bridge; in the eddies, the Red Legged March fly was still struggling on the surface. Today the trout simply would not take the imitation. Fished wet flies, dry flies and bucktails with no success, but late in the afternoon, I managed to turn over a nice trout with a quill nymph. Apparently he was hooked rather deep, for he would not come again.

May 4

Fished White Clay Creek below Landenburg this evening and took three trout on the Edson Dark Tiger bucktail. Few flies over the water.

May 14

Fished Spring Creek today. The small cranefly, commonly known as the Yellow Spider was on the water, but today few fish were rising to it. Returned to the water two trout, and kept two—one of which was plump and well proportioned. Met Bob McCafferty and Alex Sweigart on the stream. Cold and rainy all day.

May 19

Stayed last night at Al Goodlander's cabin up Weiker Run. Fished Penns Creek from Cherry Run upstream towards the Paddy Mountain Tunnel. Weather, warm and cloudy with occasional showers—ideal for dry fly fishing. The Black Quill, the Pale Evening Dun and the March Brown were all out in good numbers, and the trout were rising well. Noticed some Alder flies and Yellow Spiders that were still unexpectedly abroad. Took eight fish, five on the Pale Evening Dun, and three on the Black Quill. About a mile below the tunnel, I tied into a monstrous brown trout, which ended with the fish swimming away with my Black Quill, and part of the leader. Fried fish at the hunting cabin, and again stayed there overnight.

May 20

Fished Weiker Run this morning. The Dark Green Drake, a mayfly which afterwards turns into the Brown Drake was just emerging from the water. The trout had not yet become accustomed to it, and were not rising. Returned to the water four small trout that were taken on the Black Quill, then drove over to Spring Creek. At Spring Creek, I returned to the water five nice fish. The shad flies were just coming on. Here and there they could be seen rising from the water but as most of them were still in the subimago stage, I decided to return a few days later.

May 21

Fished Kettle Creek today with Kenneth Wykoff and caught one brook trout and one fallfish. In the afternoon, drove to Beavertown to visit Dad, and in the evening, ran into an enormous hatch of the Pale Evening Spinners. All were females, and the windshield of the car was completely covered with the yellow egg sacs. In a distance of less than a mile, I had to stop and wipe off the glass three times. These flies were lost. At some places they were as much as a quarter of a mile away from the water, and apparently could not locate the stream due to the rain.

May 26

Weather hot and muggy. Spent the forenoon on Fishing Creek in Sullivan County. No sign of fly life abroad, but apparently the Brown Quill was hatching out, since many cracked and empty nymphal skins came floating down with the current. Underneath the covered bridge below Benton, I tried to interest that old lunker with all kinds of flies, nymphs and bucktails, but he would have none of them. No fish rising anywhere, so drove over to Spring Creek. Chatted for a time with Art Snyder, and my old friend Jake Knisely at the Paradise, who informed me that the Shad Fly (2) hatch was well underway; then wandered out to the stream where I encountered "Dutch" Derr. "Dutch" and I fished together the balance of the day. No flies abroad, and few trout rising. Towards evening though, the Shad Fly came on in great numbers, and the trout simply went wild. These flies were all in the imago stage, and the majority were females, commonly known as Grey Drakes.

May 29

Alex Sweigart and I fished the N. B. of the Middlecreek today. Quite a few Fish flies abroad, but the fishing was poor. Caught a number of Iron Blue Duns that had just emerged from the water. Kept a few alive in a jar, but was successful in raising only one of them to maturity. (Three days later, this fly cast its skin, and the resulting imago was almost an exact duplicate of the Sherry Spinner of Ronalds). Along Weiker Run, Alex secured for me a male Brown Drake or Drake Mackerel, which apparently is the imago stage of the Dark Green Drake found last week in almost the same locality.

May 30

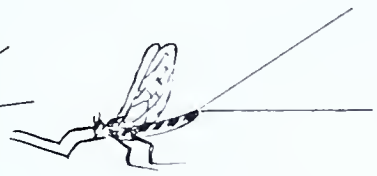
Dad and I fished the North Branch this evening. A big hatch of Ginger Quills were over the water just before dark, but the jinx was on us, for neither of us caught a trout.

June 9

Fished Spring Creek today. Caught three small trout, all of which I returned to the water. Fishing poor; creek cloudy, and weather hot. The Spotted Sedge was on the

(Continued on Page 31)

Ginger Quill Dun

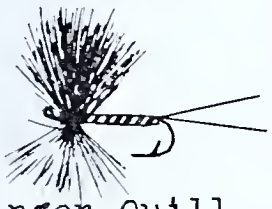


Ginger Quill Spinner

Black Quill

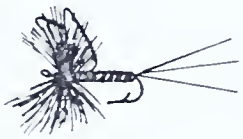
Pale Evening Dun

Pale Evening Spinner ♀



Ginger Quill Dun

Ginger Quill Spinner



Black Quill

Pale Evening Dun

Pale Evening Spinner

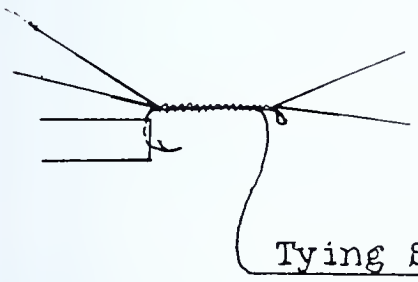


Fig. "A"

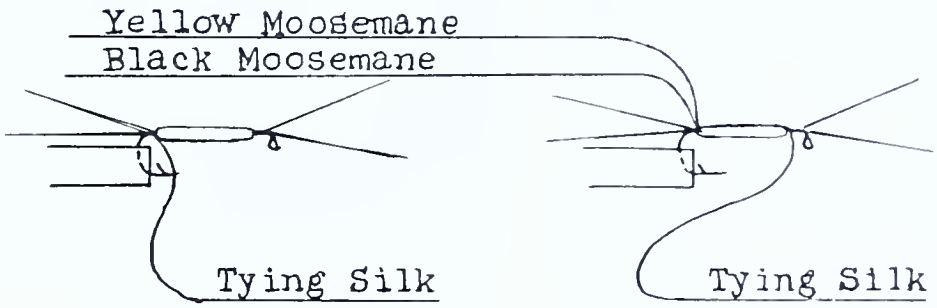


Fig. "B" Fig. "C"

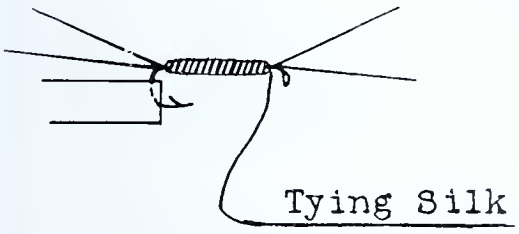


Fig. "D"

Fig. "E"

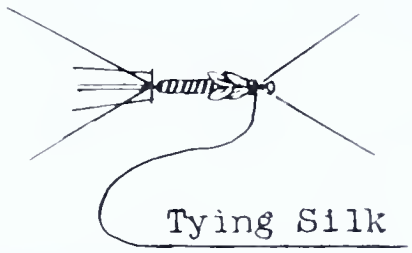


Fig. "F"

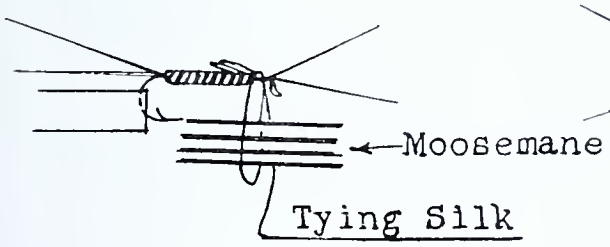


Fig. "G"

Fig. "H"

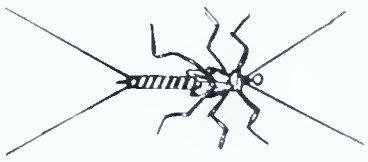


Fig. "J"

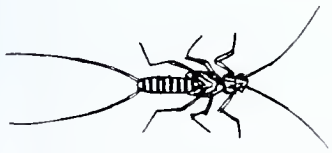


Fig. "K"

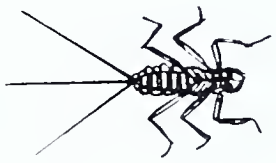


Fig. "L"

Section "A"-"A"

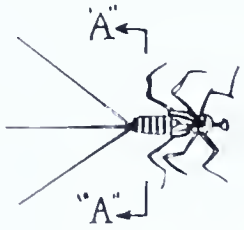


Fig. "M"

Wetzel. 2-12-40

REVIEW FOR BEGINNERS

By R. W. McCAFFERTY

FOLLOWING up on our article of last month, we are now confronted with actual fishing. Here we should acquaint ourselves with aquatic insects, the fishes, the streams in general, knots, etc.

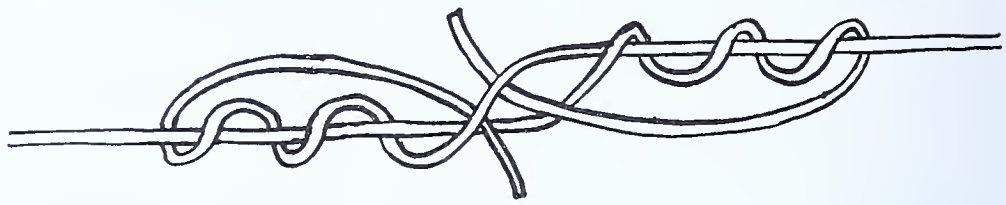
The illustrations show an easy method of attaching leader to line as well as numerous knots for attaching flies or adding tippets to the leader. These knots should be practiced with string until proficiency is attained. I prefer the looped line end for easy and quick changing of leaders; the Major Turle knot for secure fastening of the fly and the Chator knot for tying leaders.

Before actual fishing is begun it is well to study the tying of knots and get a little casting practice. We know that an ordinary "granny" or square knot may serve the purpose but those in the illustrations best suit the job for which they are intended. To become familiar with them now will prevent many anxious and perhaps regretful moments later.

The job of choosing the type of fly to begin fishing cannot be definitely outlined here. If you have chosen not to be a "purist" and have obtained dry flies, bucktails, streamers and nymphs your first decision must be—which type fly? If it is early season and the water is high and possibly discolored, bucktails and streamers will likely prove best, nymphs and wet flies next and the dry flies very doubtful. Suppose then we start with the former.

Bucktails

After some experience you will develop a strong liking for some pattern and usually begin with that. Yellow or brown are pretty staple, everyday patterns and these are often my choice. If the water is very discolored, a black fly is my favorite.



1—Chator Knot (Loose).

The casting should be tried in every direction and all conceivable methods of retrieve should be employed. Downstream or down and across stream casting, retrieving against the current, will probably become easiest but don't let it become a habit. The apparently slight difference in direction of casts and retrieves often means the difference between catching and not catching fish.

If a fish is raised but has not struck, change to a smaller size of the same pattern before giving up or changing to another pattern. This often does the trick.

Those are my basic rules for using this type of fly. If any particular method of fishing them has brought the most outstanding results it has been the across stream method. In this method the cast is directly across current and with a long line. The fly is sometimes worked as the line is slowly taken in. The current causes a belly in the line and the most strikes occur at the moment the fly reaches the end of this arc and begins working against the current. This too is a common occurrence when fishing nymph or wet flies.

In a stream filled with large rocks there is apt to be found many small pockets, especially in the riffles seemingly of insignificant size. Don't pass these up. Many nice size fish inhabit them and the working of the fly from one to another of these pockets is interesting and often exciting and productive sport.

Nymphs

Nymph fishing has come into its rightfully earned niche in the last few years. It is more delicate than bucktail and streamer fishing and not quite as easily learned but that shouldn't be discouraging. Offsetting the added study and effort one must give to learning nymph fishing is the fact that this type of fishing very often is the only way in which fish can be taken. Numerous anglers each season waste hours fishing dry flies over fish which appear to be taking floating flies but which are actually taking nymphs at or near the surface. Remember, fish breaking water are not necessarily taking floating flies. More often they are feeding on nymphs and have inadvertantly broken water in the act of catching a nymph. The more seasoned angler realizes that the genuine surface feeding trout, especially the nicer fish, cause little commotion. The actual "taking in" of a fly is done quietly and is often attended with a sucking noise and the appearance of a slight dimple on the surface where the fly has disappeared. This discourse on differentiating between a fish feeding on nymphs and floating flies is necessary at this time to help you in deciding which type fly to use.

2—Chator Knot (Drawn Tight)

Referring to the first article you will notice one of the chief requisites for fishing nymphs is a long, fine leader. Under no circumstances do I use leaders shorter than 9 feet and rarely that short. Twelve feet is to be preferred.

The question of imparting action to a nymph arises whenever two or more anglers get together and discuss this fishing. Experience long ago taught me that anything pertaining to angling should be entered into with an open mind. Having a pet method is all right just so long as it is not so solidly set that you can't change it in a moment.

A good box for streamers, eyed wet flies and nymphs.

Handy line carrier.

So it is with these nymph movements or lack of movements. Regardless of which method is most simply produced by the angler, the fish's desire is of utmost importance. All this is idle chatter of course, if

3—Leader Loop

you don't have a subject in full view for the first dozen or more experiments. Locate your nymph feeding trout first, then go to work.

My notes reveal an incident concerning a 17 inch brownie that knew just how his nymph was to be dished up. His hide-out was a huge sunken stump which was partially responsible for his exacting feeding habits. A fly or nymph floating or drifting over him would likely go untouched as the stump prevented an upward view. However, when really on feed he probably had another location from which these flies could be seen. I noticed nevertheless that if he used the stump as a resting place only, he was not averse to taking on occasional free wandering natural if it ventured within two or three feet of him.

I saw him emerge from his lair suddenly one day, take what was probably a nymph and retreat as quickly as he appeared. Because of the location of the stump, I believe it was used as a rest station in all but his most active feeding periods. The water at this point was about five feet deep and very slow, being at the tail of a long pool. By casting about ten feet upstream from the stump, the fly sank and came to rest on the bottom about 18 inches from where the fish first appeared. After a moment's pause I retrieved the line quite fast and at the same time vibrated the rod. The result was a fast swimming or scurrying nymph which I have since found to be rarely effective. After several retrieves of this type without success I changed to the following method.

When the nymph came to a stop on the bottom where I figured it to be within vision of the fish I let it lay there for two or three minutes. At the end of that time I twitched it slightly and let it lay again, this time about eight seconds, then another twitch. The trout had now come out of hiding and as he did so I again twitched it and he took quickly and solidly. All this occurred on the bottom and the nymph had not been caused to rise more than an inch or two in any of the twitchings.

This brings to mind another trout in my early experiences of nymph fishing. I was trying the method of making the nymph swim about four or six inches, then letting it pause for about fifteen seconds. As this occurred in clear water I had previously spotted a fish and could study its reactions. On the first cast the nymph dropped about five feet upstream from the fish and as it drifted to within two feet of him I began the actions. As it was passing, his fin motion increased but he did not move after it until it was well past him. Then, as he approached it I stopped the action and the fish immediately stopped and turned away. Seeing this refusal, I began the actions promptly and the fish again turned and this time took the nymph but it was moving when he took it.

Evidently he was not sure enough that it was food after his first inspection but when it again started swimming and continued to do so the act of deceiving him was completed.

Of course these experiences cover just the fish I was successful in taking. I've been able to use the knowledge gained from these experiences in taking numerous fish in later years.

In fast water the most common method is the natural drift. Used in upstream fishing, it is very similar to dry fly fishing except that the lure is invisible and requires some experience in learning when to set the hook. A flash of light, a momentary retarding of the drifting leader and line or a minute splash on the surface, all these and more are signal enough to set the hook. You should train yourself to strike at the slightest provocation. This method is used also in conjunction with the up and across stream casts in which case the nymph is allowed to drift past you and, when the line straightens

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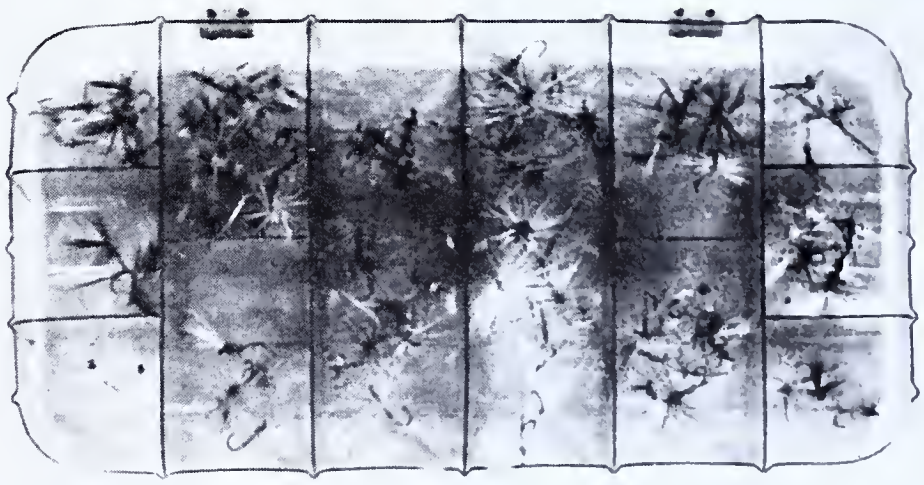


A practical dry fly box.

FIRST DAY

By Don Miller

THOSE of you who are going out on April 15th for your initiation into that great fraternity of "Catcha Lotta Trout", the sport of kings—and presidential candidates—that bane of all good wives, and wrecker of peaceful firesides—lend me your ear—or should I say eyes. For here on these very pages I am about to unfold a tale that comes straight from the vault of valuable memories in the life of a fisherman.

It was a typical "first day"—cold, rainy in that annoying drizzly way that makes one feel as though he would like to do anything but fish—but then it was the "first day". Bob and I—Bob's my brother, and a better fisherman never cast a tapered fly line this side of the rockies—like all beginners, we suffered greatly because of our lack of knowledge of things that all good fishermen come to know after a few years' experience on the stream. We didn't know, for example, that our bait boxes should have been filled before leaving home, our leaders knotted and looped ready to put on the line, and our reels filled all ready to slip on the rod. Consequently, we suffered, and because we suffered, we learned. Now, you beginners who are thinking of profiting by our experience—don't try it—you might remember the things just mentioned and forget a million others; to be a good fisherman you will have to suffer like we did, you will have to learn by experience. Go right ahead, get your line tangled—and then stand waist deep in forty-degree water for half an hour regretting your folly while you try to untangle it—go ahead—hang your fly up in an overhanging branch before you learn to cast sideways on a wilderness stream. These things are all part of learning to be a good fisherman, and one who appreciates the value of having good fishing equipment and fish in the streams to catch with it. But to get back to the story.

That small stream . . .

After the gods had decided that we had done a sufficient amount of suffering to make us appreciate that little ten or twelve inch trout, the rain stopped—before which we had both managed to inveigle a little seven inch rainbow to accept our worms for what they thought was going to be their breakfast. My conscience has often irked me for keeping those piscatorial infants—but forgive us—brother fisherman—we were young. After this, we decided to be smart, and avoid the crowd, by moving upstream where there were fewer fishermen, and as we have often discovered since—fewer fish. Well, after trying every likely looking spot, with no results, I suddenly got a bright idea, which was soon to prove what I have many times since learned about trout fishing—namely, that you have to think to catch trout—use your head, there is a great deal more to it than just casting a fly. Anyway, this idea of mine had to do with a small stream, evidently the outlet from some farmer's spring-house, and when I say small, I mean it was really small, not more than three feet wide at the widest part, and the deepest pool about two feet deep. But it was nice clear water, and very inviting looking, and I thought that if I were a trout, I would surely choose such a spot for a hideaway. So I said to Bob, "Bob," I said, "I have an idea, I'm going to sneak up along the bank of that creek, and drop my line in, just to see what will happen." Bob didn't say a word, but just looked at me with that half-disgusted look in his eyes, like the time I tried to catch a butterfly with my landing net. But I was undaunted, and I stole silently up the bank of the brook, and I was so cautious, that, Bob told me afterward, I looked as though I were playing hide-and-seek with the grasshoppers.

After a slow and arduous journey of about ten feet, I finally reached a likely looking pool, and standing back about ten feet from the bank I cautiously dropped the baited hook over the bank. Well, brother fishermen, I no sooner lowered that worm into the water than my rod started to vibrate so violently it actually made my teeth rattle. Fortunately, I had the presence of mind to take my time, and in a few seconds I was unhooking a beautiful twelve-inch rainbow. Well, that was the beginning of a very enjoyable first day, for a couple of amateur fishermen. Before we decided to quit that little brook, and leave a few fish for some other enterprising fishermen, we had managed to capture nine beautiful brookies and rainbows, ranging from ten to thirteen inches, and every one taken from this tiny trickle of water, hardly big enough to be rightly called a brook. So you see, that was one bright idea that really got results.

If you tie your own leaders for wet fly fishing, tie in the dropper loops to point toward the line end. This will cause the loop to stand away from the leader when in use, thereby avoiding the annoyance of having the dropper flies winding themselves about the leader.

French Creek in Chester County.

SLATINGTON CLUB TO PLANT TREES

The annual meeting of the Slatington Skeet and Sports Association was held at Roberts restaurant with John Craig, vice-president in charge in the absence of President Allen Krum.

Reports offered at the meeting disclosed that the organization had distributed 48 rabbits, received from the State, 72 purchased by themselves, and 98 woodcock, also donated by the State. Four hundred brook trout were distributed in adjacent streams by the State during the past season. It was also revealed that the club's reforestration program in 1939 resulted in 1000 new trees being planted bringing their total to 3500.

Election of officers for the new year was held with the following members being selected to serve: Allen Krum, president; John Craig, vice-president; LeRoy Yenser, secretary, and Herman Miller, treasurer. The board of directors includes: Dr. Harry B. Kern, Allen Behler, E. H. Gelton, Dewey Lentz, Earl Evans and Victor Deibert.

Authorities on wildlife spoke during the social program of the evening. District Game Protector William Moyer of Allentown talked on game refuges and urged hunters to send in their game reports. Charles Neff, Field Sports columnist of the Allentown Morning Call, addressed the members on conservation of game and also pointed out the advantages of game refuges. Entertaining motion pictures, taken on a hunting and fishing trip in Canada, were presented by E. H. Graver. The meeting was concluded with a luncheon and refreshments.

Question: Recently, while discussing trout measurement, the question was raised on what procedure a fish warden followed in measuring trout while astream. Are trout measured from the base or fork of the tail to the tip of the snout?—J.S.

Answer: Trout are measured from the tip of the tail to the tip of the snout by fish wardens.

Question: What will be the rules governing fishing on Wissahickon Creek in Philadelphia this year?—W.G.K.

Answer: It has been announced that fly fishing for trout will be permitted in the Wissahickon on Wednesdays and Saturdays during the open season. Since these days have been specified the opening date for fishing that water will be Wednesday, April 17, two days after the regular trout season opening on other state streams. Live bait may be used only below the high bridge at Walnut Lane and above Bells Mills Road and flies only may be used betwen Bells Mills Road and Walnut Lane. If more details relative to regulations on the Wissahickon are desired get in touch with Hon. Edgar W. Nicholson, member of the Fish Commission, 815 Land Title Trust Bldg., Philadelphia.

Question: In addition to Penns Creek, what are some of the larger streams in Centre County?—M.K.

Answer: The list of streams 10 miles or more in length includes Elk Creek, reached at Millheim on Highway Route 45, Little Fishing Creek, reached at Mingoville on Route 220, Little Moshannon Creek, reached at Philipsburg on Route 322, Pine Creek, reached at Woodward on Route 45, Spring Creek, reached at Bellefonte on Route 220 and Sinking Creek, reached at Potters Mills on Route 53.

Question: This is drawing the line pretty fine, but if you had your selection of dry flies narrowed down to three patterns, what would they be? How about hook sizes?—R.G.W.

Answer: Man, is that a tough one, but what fisherman doesn't have his pets? We'd nominate (hold everything) the Ginger Quill, the Pale Watery Dun and the Black Gnat. On the first two patterns, hook sizes would range from 12 to 16 and on the last mentioned from 14 to 20.

Question: I have an 8 1/2 foot rod weighing 5 3/4 ounces with a pretty stiff action. Am planning to get a good level line for it. What size would you suggest?—H.G.

Answer: Our guess in this instance would be a C level.

Question: There is a meadow stream near my home that used to be mighty good brook trout water but of late years the bottom has become covered with silt. It has gone back fast. What would be a good method to scour out the silt from the bottom?—J.F.

Answer: V type deflectors or wingwalls of either stone or logs to speed up and concentrate the stream current in narrow channels should prove helpful.

Question: Have heard the brown trout referred to as German brown trout and Loch Leven trout. Who was first responsible for importing it to this country? How did the latter species derive its name?—J.L.H.

Answer: The first shipment of brown trout was received in the United States in 1884 by the United States Fish Commission from Herr Von Behr of the German Fish Commission. Two years later, the first brown trout eggs to be hatched in Pennsylvania were hatched at the Corry hatchery in Erie County. Shipments of brown trout eggs were later received in this country from Great Britain. The Loch Leven trout derives its name from that beautiful lake in Scotland. Skilled fish culturists, since its introduction claim that extreme difficulty would be had today in differentiating between the German and the Loch Leven.

Question: Am planning to do some trout fishing in waters in Pike County this year. Like big streams for my fishing and am wondering about a good location to stay. Could you give me this information?—N.L.V.

Answer: Pike County boasts some of the largest trout waters in Pennsylvania. Offhand we might list the Lackawaxen and Big Bushkill. The former, having a stream length of 27 miles, flows 11 miles through Pike, while the latter, 21½ miles in length, offers 6 miles of fishing in Pike County. There are also a number of good smaller streams including Dingmans Creek, Shohola Creek and Middle Bushkill Creek. Accommodations can be had at Milford which is nicely located for the trout fishermen planning to fish county waters.

Question: I hear that the new copy of the South Bend catalog is now out and that it contains some mighty fine illustrations of fish and tackle hints. How would I secure a copy?—J.R.

Answer: If a copy is desired, write to South Bend Bait Company, South Bend, Ind., addressing your request attention Len Hofmann. We understand a copy may be had for the asking.

I bin areadin, so much erbout this here fly fishin' fer trout thet I sent away an' got me a fly fishin' outfit an' I'm agonna taik it up this yere. Reckon mebbe it'll be sorter comic ter sum o' the boys ter see an ol' coot like me, thet allus fished worms, minnies, crickets an' 'hoppers tryin' this new fangled game, but we all gotta lern sumtime an' this yere I figger is a gude time ter start.

Got the idear last seezun in May watchin' a young feller fishin' dry fly in the medder run. I hed ketched a cupple nice speckled trout, eround a foot long, on crickets erly in the mornin' but when the sun got high the trout quit comin' fer me. Then I sees this feller fishin' upstream. They wuz a good hatch o' flies cumin on an' I sees him ketch one an' then start checkin' in a leetle box he hed bin carryin' in his basket. The trout shure wuz raisin' by thet time and' did he go ter town. Durned ef he didn't ketch 12 nice speckles whilst I watched him, an' them trout musta a bin frum eround 8 to 13 inches. Whut I liked erbout it tho wuz the gude sport he showed out ter be. Outer thet 12 trout, all o' them legul, he only killed two, both eround 13 inches. An' when yer talkin' 13 inch speckled trout, brother, yer talkin' fish jest erbout ez nice ez they cum from our runs. Most o' the trout he hooked he never so much ez lifted outer the water, takin' the hook out an' lettin' 'em go. Man, the way he laid thet leetle fly, he called it a ginger quill, size 14, on the water wuz purty ter watch, an' no mistaik.

Well, we start atalkin' an' I sez ez how I reckoned it ud taik a whale o' a lot o' practis fer a feller ter lay out a fly like thet. Nuthin o' the kind, he cums back at me. Here, taik this rod an' try it. Well, Elick at fust ahandlin' thet outfit I felt like a overgrowed calf tryin' ter stand on its back laigs. But then I seed ez how, with him showin' me how whippin' out the line wuz mostly in the rist, an' tellin' me ter hold my castin' arm like I cude hold a book under it, puttin' thet fly on the water wuz rite eezy. Then he give be the dope on the rod, sed ez how 8½ foot wuz a gude length, thet it shude be erbout 5 er 5½ ounces an' fair stiff, an' thet a level C line ud be gude fer a starter. Give me dope on leaders an' sum gude flies, tew, an' now I got a outfit thet handles mitey nice.

Shure am set ter taik up this fly fishin' this yere fer sartin. Be lettin' ye know how it's cumin' one o' these days.

THIS TROUTING GAME

A Discussion of Problems Pertaining to Present Day Trout Fishing

By ALEX P. SWEIGART

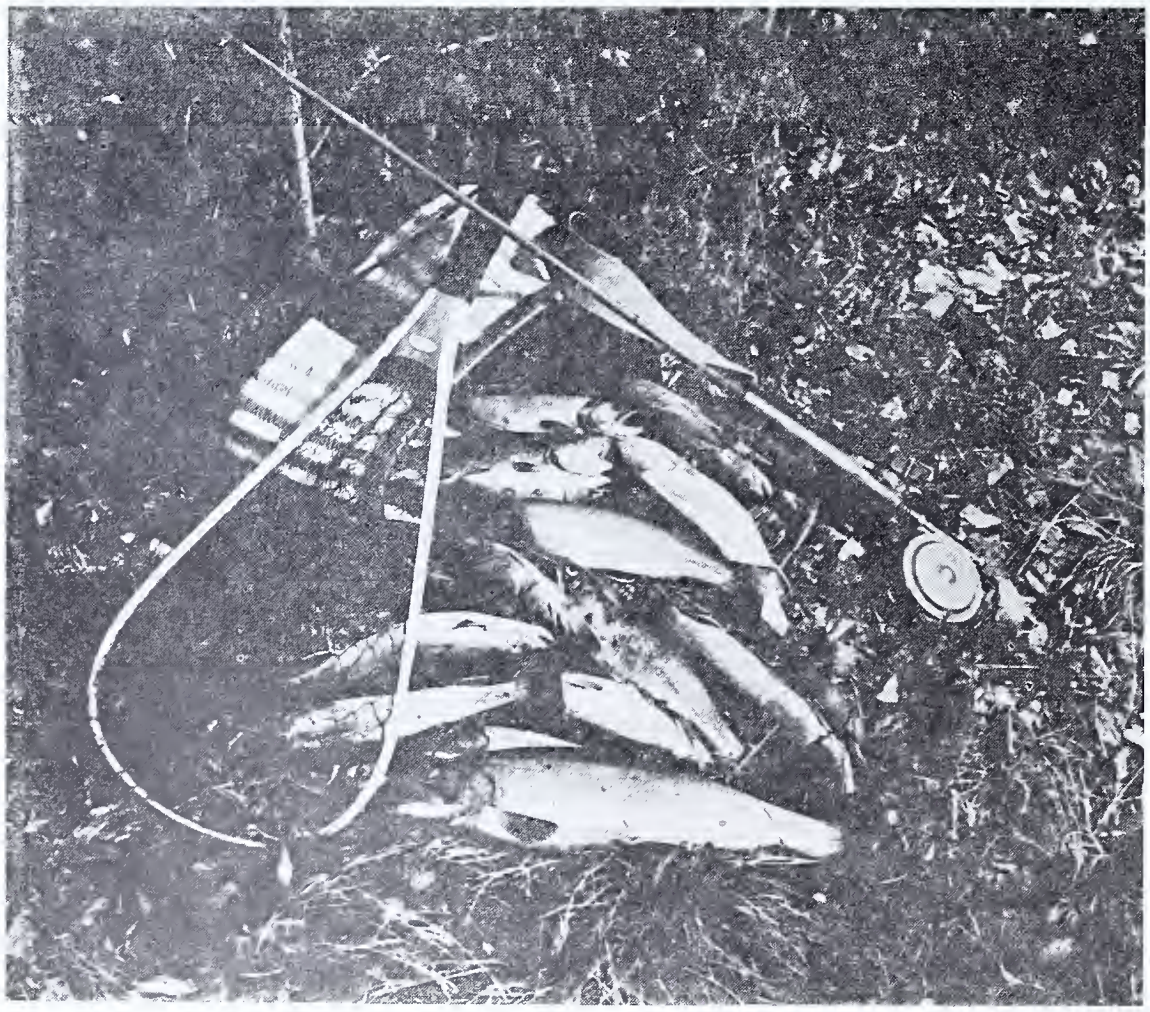
INCREASING popularity of trout fishing as a sport with the angling public in recent years has been one of the most noticeable trends in freshwater angling. In Pennsylvania and other densely populated states on the eastern seaboard, the problem of furnishing good trouting in waters being fished so intensively is a major one. It all simmers down to a question of supply and demand, with a splendid system of hatcheries owned by Pennsylvania fishermen furnishing the supply for public waters and the fishermen the demand.

Certain factors that have very real bearing on the problem of meeting this demand are not to be overlooked. First is available mileage of cold water streams suitable for carrying trout in the Keystone State. While Pennsylvania has a number of "heavy water streams", (the Brokenstraw in Warren County, Penns Creek in Centre County, the Brodheads in Monroe County and the Little Lehigh in Lehigh County, to mention a few of this type) a majority of our trout streams are smaller waters in mountainland and farming country. The stream survey conducted by the Board shows that 5700 miles of trout waters in the state are now being stocked with trout of legal six inch size and over. Of approximately 400,000 fishermen licensed to angle in Pennsylvania last year, it does not seem like stretching the point to say that perhaps 250,000 joined the first day invasion of our trout streams. Assuming that this was the case, there would have been *approximately 120 feet of water stocked with legal size trout for every fisherman.* Obviously, this congestion of fishermen does not apply to all streams, for better known and highly popular waters draw most heavily.

Now let us turn to a second factor having strong bearing on the season fishing. In preparation for the first day rush to the trout streams, suppose 600.000 brook trout, brown trout and rainbow trout of catchable size have been stocked during the spring. This would mean, if 250,000 fishermen were astream on the first day, that each angler's share would be approximately 2½ of these stocked fish. Here again it would be virtually impossible to strike an average as to catches, but limit creels of 10 trout are not uncommon on opening day. It is reasonable to assume that with the intensive fishing to which our streams are subjected early in the season, the trout population in such waters is bound to be cut into heavily during the first week.

A third factor, vital to every fisherman who has the welfare of his sport at heart, is the threat of posted land. A mighty sizable portion of our best trout waters flow through agricultural sections and the goodwill of the landowner toward the fishermen is to be reckoned right at the top of the "must" list for better fishing. Fishermen as a class are square-shooting sportsmen, but unfortunately in any large group a very small minority, perhaps not more than two or three percent, can play merry ned with goodwill efforts. This issue must be met squarely for its bearing on future angling in our waters is increasingly important. Additional mileage of trout streams available to the angling public is a goal well worth striving to attain.

Trout stocked from the hatcheries have proved a major contributing factor to the Pennsylvania angler's sport on many of our waters.



This creel of brook trout was taken while the daily creel limit was still 15 a day. Sentiment prevails with some fishermen that a further cut in the present daily limit from 10 to 5 a day would not be excessive.

Natural Factors

Amazing and a deserved tribute to the splendid trout production of Pennsylvania's hatchery system is the fact that, despite unfavorable natural conditions during the past ten years, our anglers have continued to find sport on our trout streams. Since the drought of 1930, stream levels have been generally low during the summer months, last year's drought capping the climax. Coupled with the fall in stream levels so unfavorable to the natural food supply was the disastrous flood of '36. Walls of water in high banked streams gouged loose good sized boulders, scoured the bottom and in some extreme instances formed new channels. Probably no other single factor during the past 25 years had a more drastic effect in changing general stream appearances or in destruction of available trout forage. The drought last year also exacted heavy toll on trout stream organisms as shrinking water levels in many streams exposed large sections of riffles and shallows to air and sun.

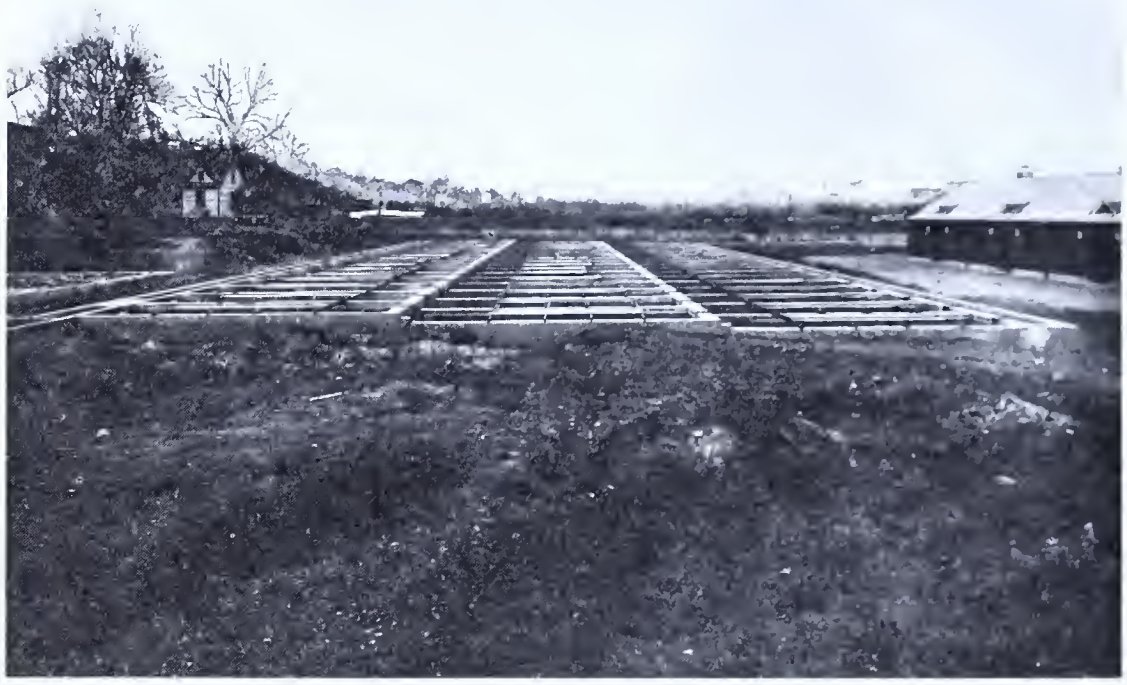
The threat of trout stream predators under low water conditions prevailing last summer and early autumn is not to be taken lightly. Watersnakes in particular took heavy toll

from trout in waters severely affected by drought. Campaigns to control this predator staged by sportsmen throughout the state paid big dividends to the fishermen last year.

Any discussion of natural factors affecting our trout streams would be incomplete if we failed to take into consideration erosion which has been in progress on many of our low temperature watersheds for many years. Unchecked run-off of surface water in areas where much of the timber has been removed has undoubtedly contributed heavily to present unfavorable natural environment for our trout in streams affected.

The effect of civilization upon modern trout waters is, we believe, forcefully summed up by Wilson H. Armistead, noted British fish culturist, in the following words relative to English streams:

"Year by year the food supply is getting less in the headwaters of many trout streams. Land is being better drained: Flood water, which used to cause a welcome spate lasting several days, now runs off in a few hours and sweeps the streams clean. Unless all these contrary influences are intelligently counteracted, their effect on the fishing will not be long in making itself felt. There is every inducement to be on the lookout, and every scrap of care bestowed on a stream will bring its own reward. Look around and see what the moorland and waste places produce. Nature is at work there and doing her best, and even on good soil the value of her crop is small compared with what man can accomplish when he takes her into partnership. It is precisely so with streams and lakes. Nature at her very best cannot do what man can accomplish with her aid; but man must remember that she is the senior partner with all the knowledge, all the capital, and most of the directing power. He must follow her directions carefully and conscientiously, always finding out the meaning of this or that, and passing nothing by which is not understood".



Trout nursery ponds at the Reynoldsdale Hatchery in Bedford County.

A typical trouting scene on one of Pennsylvania's popular trout waters. This picture was taken on the Little Lehigh in Lehigh County.

The Angler's Forum

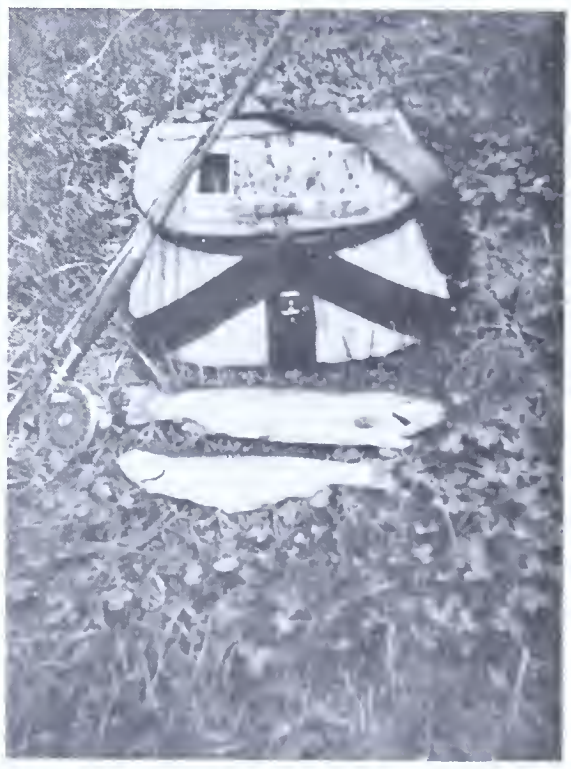
Having discussed in a sketchy fashion a few of the problems bearing on present day trout fishing, let us turn to the fishermen and some of the suggestions they have made relative to bettering the sport. We list the following for your consideration: (1) Reduce the daily creel limit on trout from 10 to 5 a day; (2) Raise the minimum size limit on trout from 6 to 8 inches; (3) Close small cold water feeders, suitable as nursery waters, to all fishing; (4) Have organized sportsmen's clubs in the various counties appoint committees to actively cooperate with landowners in pressing charges against those who violate property rights; (5) Increase the natural food supply in trout waters; (6) Reduce the age limit for those taking out a fishing license from 16 to 14 years; (7) Close waters listed for stocking with legal size trout to all fishing except during the open trout season; (8) Establish a reasonable season limit on trout. That's the list and we now give you the arguments of those backing these suggestions.

Reduction of the daily creel limit. In view of the intensive fishing to which our trout waters are being subjected, it is argued, the present creel limit of 10 trout a day is entirely too high. If water conditions are at all favorable during the first two or three days of the season, it is not an unheard-of feat for a fisherman to take his legal quota of 30 trout in the first three days. No matter how heavy the stocking, it is ridiculous to think that a stream can continue to provide good fishing later in the season when fisherman after fisherman takes his limit of 10 fish. By cutting the present creel limit in half, at least some progress would be made in overcoming a fished-out condition by later in the season. Furthermore, five nice trout should satisfy the average sportsman.

Raise the minimum size limit on trout. Those in favor argue that a six inch trout, size and weight considered, is hardly worth carrying home. They contend that by raising the limit to eight inches, smaller fish could be carefully returned to the water thus insuring a possible carry-over stock in the streams for the next season.

Close small nursery waters tributary to major streams to all fishing. It is contended that such streams carry a stock of trout ranging in size from around three to 5 or 6 inches, although admitted that occasionally larger fish are to be caught. The tendency of these fish to drop into heavier water as

(Continued on Page 29)



A brace of trout like this should satisfy the sportsman-angler, it is argued in some circles.

I TRY NIGHT FOR TROUT

By JOHN J. MAHONEY

THE night was dark, breathless. Faint moonlight filtered thru the treetops casting grotesque shadows on the stream. Above the piercing voices of insects could be heard the whistling of a line back and forth thru the air. Two figures stood knee deep in the water. One was motionless, the other was wading slowly forward. Because of the thick growth so close to the edge of the stream and the swift water the wader was having difficulty. A few muttered words and then his line whipped ahead of him.

"Say, Pop," I grunted, "he must not be there. We've been here long enough. Let's go upstream?"

"Have patience, Jack, and be quiet. He's a fussy devil. Come up baby and get your dessert".

The words no sooner left his mouth than baby did come up and smack he took the bait. Pop set the hook and the battle started. I shined my flashlight on the water to watch the struggle. It was a magnificent trout. His first lunge nearly broke Pop's rod. My arm swung like a pendulum trying to follow his antics with my flashlight. Twisting and darting he tried to get under some jammed logs at the head of the pool. Failing in this the trout swerved and came straight toward me. Pop, reeling his line in, started for shore. I judge the trout was over two foot. Sudden panic gripped me. I couldn't resist the temptation any longer so taking my net I waded in after him.

"Come back, come back", Pop yelled, but on I went.

The water was up to my neck as a silver streak went past me. Dipping my net underneath him I lifted up. A sagging weight in my net as the line slackened. A flop and he was gone.

"You dumb-bell", Pop was jibbering. "You made me lose him. What in the world possessed you? Come out of the water before you drown".

In the depths of despair I waded out and then Pop slapped me on the back. "Boy, wasn't that great. We'll get him some other night, Jack," he grinned. "You're a pitiful sight. We'll go home and come out again tomorrow night".

I often laugh as I look back at that incident. I had gone over to see Pop the previous morning about an insurance policy. He lived in a shack on the outskirts of town. Grizzled and short of stature, his age about 70, he still had a lively step. An ardent sportman he was known as an authority on fishing and hunting.

"Dipping my net underneath him I lifted up. A sagging weight in my net as the line slackened. A flop and he got away."

Pop and I were friends so, never rapping, I opened the door and walked into the kitchen.

"Holy Mackerel", I exclaimed. Laying on the table were seven splendid trout, all over a foot long. I fondled the biggest one in my hands. Just then Pop entered.

'How do you like those, Jack? That one is over 21 inches. I've been after him all season. I finally landed him last night".

"At night", I interrupted. "Is that when you caught these trout?"

"Sure I catch all my trout at night. That's the best time to fish. Sit down and have some coffee. I suppose you want another payment on my insurance policy. Don't you collectors ever fish at night?"

"No", I answered. "Dusk is my limit. I've been fishing a lot this season but the only worthwhile thing I've got so far is the exercise. Oh, sure I caught a few trout".

Pop snorted. "You modern fishermen. If luck is with you alright; if not you come home empty handed. That biggest trout wasn't born that way. He was smart and clever but I finally outwitted him. Last night was a good night to fish. Remember it was dark and cloudy, raining a little. I knew this trout stayed under a waterfall. The fir trees grew close to the edge of the bank and the only possible way to fish this hole was wading in from the lower end. My bait was just plain worms. You know when you first dig worms out of the ground they are soft, flabby and no life. But I keep them in moss for a week. Say, this hardens them and when you put them on a hook, they are lively and full of pep and will stay on in the swiftest current. I changed worms every few minutes and it must have been 30 minutes before that trout struck. My pole quivered like a reed in the wind but I had hooked him good and his final struggle ended on the bank".

The final outcome of this conversation was that we went fishing that night. As I said before, we had poor results because of my excitement but Pop had promised to take me out the following evening. He also told me to carry a bigger variety of flies. I only had one type with me called the Heather Moth. I had quite an array of these in brown and gray colors. Proudly I had displayed these to Pop. He swore and then laughed. "No wonder you never catch any trout. Any old fly will never do. Take notice of the natural flies above a stream. Catch a few in your hat. Out of your artificial flies pick the ones that resemble these the closest. Don't ever forget that and you'll have better luck fly fishing. Come around after me tomorrow night at five".

We arrived at the stream early that night. The other fishermen were just going home. Pop and I rigged up ready to fish. There was a hatch of flies above the stream and Pop had some artificial ones that resembled these exactly.

"Sit down, Jack", Pop said, "and have patience. We have the whole night ahead of us. Turn on your headlights until I fasten these flies. Put this fly on the end of your leader and this White Miller about three foot from that. Now you notice there were no White Millers on this stream, but I always put one on my hook. It's the only thing visible in the dark. You can tell by its position where your other fly is. Ready, let's go".

As we waded into the stream, Pop turned to me. "Take your flashlight out and put it on your belt. It's always ready for instant use, but don't shine it on the water unless you absolutely have to. Did you hear that splash? There's one jumping over there. Now be careful and move a little away from me".

I could hear Pop's line whizzing thru the air but I couldn't see where he was throwing it. Another splash, then Pop's voice. "He's on, Jack. Don't shine your flashlight". Faintly I could see Pop's outline. He was working his way to shore. As I watched him my line went upstream. Suffering Catfish. There was some thing on the end of it. I fumbled my pole as the reel started to sing. It reminded me of fishing with a blindfold over your eyes. Trying to take in slack I found was impossible so I just held firm, and Pop came to my rescue. How he could see was beyond me.

"Steady, Jack, steady", Pop encouraged me as he waded into the stream. Another resounding splash then Pop's voice. "O.K. Jack, I netted him and I'm not all wet either."

On the shore we laid the two trout, both brownies over 16 inches. Turning to me Pop said, "Jack, you don't need to use that much line at night. My belief is trout can't see you then. All the line you should use is ten feet beyond the tip of your rod. Sometimes there are a few exceptions. Why I've been fishing in the dark and had trout jump right at my feet. Let's go upstream".

During the next three hours we caught eight more trout. Pop was certainly a wizard. Out of all the trout he hooked he only lost one. It was after midnight so we sat on the bank and ate a little lunch.

"Well, Jack, it looks like rain. What say we try to catch the one you were in swimming after. I got some worms with me. Maybe we can hook him again".

So saying he reached in his pocket and pulled out a can. I shined my flashlight. It was full of worms packed in moss. They were wriggling and squirming around and that moss was certainly a tonic to them.

It started drizzling as we waded upstream. Pop was whistling a marching tune and I was keeping up with him. Once a deer snorted close by and I nearly fell in the water again.

Suddenly Pop cautioned me. "Alright, Jack, here we are again. Now come over by me. Bait your hook and don't put any sinkers on the line. Cast it carefully and draw it across the hole like a fly".

As I started to throw my line it caught in the trees above me. "You fool", Pop snorted. "Don't look at it. Untangle it". Mortified I reached up and broke it off the limb.

"Now don't get excited", Pop said, "and try it again".

Carefully I threw the bait ahead. Time passed but neither Pop or I had a strike. I finally put on a few heavy sinkers and let my bait in the hole. There was a gentle nibble, then a hard tug. I jerked and started reeling my line in. Shucks, it was just a little sucker about ten inches long.

Neither Pop or I ever caught that trout. Possibly the idea of me diving in after him scared him away. As far as we know he is still there. But since that time I am a confirmed night fisherman. TRY IT SOMETIME.

"It was a magnificent trout. His first lunge nearly broke Pop's rod."

FIRST TROUT HATCHERY IN UNITED STATES

(From bits of History by S. R. Beard)

About 1871, Dr. J. F. Schirner, then prominent physician in Tamaqua, constructed the first hatchery in the United States for the propagation of brook trout. The hatchery was located on the Owl Creek on the farm of Dr. Schirner in the Owl Creek Valley, Rahn Township, Schuylkill County, about two miles from Tamaqua, which farm is now owned and conducted by his grandson Asa F. Schirner. The series of small dams was built along the wooded section of the stream east of the present location of the bungalow of S. R. Beard and south of the present site of the Tamaqua Rod and Gun Club, and as the fish grew in size after hatching, they were transferred downstream through the series of dams to the largest enclosure.

At the end of the dams toward the east was located a stone hatch-house and other small frame buildings used in connection with the hatchery. Calves heads and other meats were suspended in boxes above the water in the dams and allowed to rot and the grubs and worms falling into the water provided feed for the fish.

Dr. Schirner had arranged for a display of the various sizes of brook trout at the Centennial held in 1876 in Philadelphia and had purchased the glass tanks and other apparatus for the display, when shortly before the exhibition was to open some malicious persons, at night time, blew open all the dams and the entire lot of fish escaped and were lost. This novel exhibition could not then be completed.

Dr. Schirner's office and residence were located on West Broad Street, Tamaqua, on the same premises now occupied by his daughter, Mrs. Annie Lineweaver.

In 1936, Thomas O'Hara of the Fish Commission visited the Tamaqua Rod and Gun Club and looked over the remains of the old hatchery. He was impressed by the number of native trout in the stream and suggested that we build the dams and pools with the aid of W.P.A. In 1937 we succeeded in getting started and had the project completed in time to fill it with trout in the spring of 1939 when we received 24,000 brown trout about one inch long from the Federal Hatchery, at Lamar, Pa. In October, 1939, with the aid of the Isaak Walton League of Mahanoy City, we distributed about 10,000 nice trout all close to the legal size, and we estimate that we will have about 10,000 more for Spring stocking.

Our pools are fed from a supply dam holding about 350,000 gallons of spring water. Even thru the drought of 1939, we had plenty of water to keep a nice flow going thru our pools and Mr. Tannar, of the Lamar Hatchery inspected our project and complimented us on the size and condition of the fish. The feeding was taken care of by volunteer labor of several of the club members, including Bill Yost, President; Bob Gerber, Treasurer; and Franc Ulrich, Secretary, is the report.

TAMAQUA ROD AND GU

(Photos by Bi

A $30,000 project, sponsored by the an a Creek Valley, two miles southeast of Tamaca, rat and federal supervision. Last year, the first i w planted in public fishing waters. This hatcer been built by Dr. J. C. F. Schirner in 1871.

LOOKING EAST ON MAIN SUPPLY DAM
350,000 GALLONS OF PURE SPRING WATER

THREE OF THE SIX REARING POOLS

IKE WALTONS AND CLUB MEMBERS
WITH SEINE RAISED

LOOKING WEST ON MAIN SUPPLY DAM

LUB TROUT NURSERY

resident)

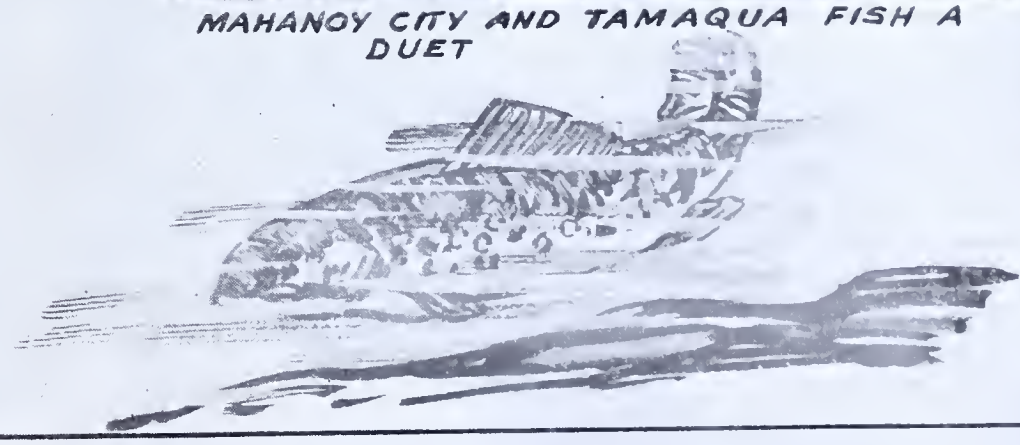
d and Gun Club, is located in the Owl
erated by members of the club under state
ration, 24,000 brown trout were raised and
ginally the first in the United States, having

WE HAD LOTS OF HELP THIS DAY TO DISTRIBUTE 10,000 BROWNIES

THE WATER WAS COLD BUT WE HAD LOTS OF WORKERS

MAHANOY CITY AND TAMAQUA FISH A DUET

TWO HAPPY WALTONIANS FROM MAHANOY CITY



From Worming To Dry Fly, All Trouting is Sport

By "SCOTTY"

ONE reads a great deal these days about trout fishing and its art, each specialist claiming his particular way to be the more scientific. The so-called purist holds fast to his dry flies. Others hold equally fast to wets; some to nymphs and some to the humble worm.

I claim to write impartially, because I earnestly believe any kind of trout fishing calls for art and science. Please let me try to qualify my assertions—not as an expert but in the hope I can persuade some of the fraternity to see the other fellow's way, at least in part. I have fished for trout for 40 years, part of that time in my native Scotland and the balance in the United States and Canadian waters. I was initiated into the sport by my dad and some of his cronies and later in my life I fished with some of the best "trouters" in Auld Scotland.

I have read, and still read, virtually every fishing magazine offered on our book stands and am always interested in what each fellow has to write, if it pertains to trout. However, I burn up slightly when I read of anyone who criticizes the other fellow's methods as "not sporty" or unscientific.

In my early days in Scotland dry flies were unknown and the popular method of fishing was with wet flies. The novice usually started with a two-fly leader of about six feet, 2x level, but as he became more expert he would increase his cast to either three, four or five flies on a 9 to 10 foot, 3x or 4x gut leader. From that point on he would graduate to a horsehair leader running about 12 feet long and with 4 or 5 flies.

The two top strands of a horsehair leader, that is about two to three feet of leader nearest the line tie, were pleated horsehair and from that point to the end was single strand horsehair. Each strand was joined together in the same manner we now use in making a fine gut leader.

The hair was selected from gray horse tails and each strand (single hair) was carefully selected to match in strength the others to be used in making up the "cast" or leader. The drag or ratchet is taken out of the reel to be used. Otherwise a horsehair "cast" would not survive the first decent strike.

I believe you will agree it takes an artist to cast a 12-foot horsehair leader, mounted with say five flies. Yet in a moderate wind a good hair fisherman can control his casts with accuracy. Fingers must be kept clear of the line and the reel has to be free running, so the moment a trout strikes the reel will run without any obstruction.

You do not dare strike at a fish when using horsehair. The trout hooks itself and no check must be made on the line as the fish runs or you meet with immediate disaster.

When the trout carries the line to the end of his first run great care must be taken before you dare try to retrieve the fish. This is done by stripping in the line very slowly with the left hand. The angler soon learns by the feel or touch whether the trout is ready to retrieve. When you start to bring him in you must do so very carefully and be ready for another run.

This second run the trout is forced to take under slight pressure, as the angler keeps the line running between the forefinger and thumb of his left hand, but pressure is applied only according to the strength left in the trout. This is repeated until the fish is worn out. Only then is he carefully brought back to the landing net.

I have seen many trout brought to net in that fashion, on their sides, completely whipped. Before one criticizes wet fly fishing as not sporting or scientific let him try horsehair fishing.

There was an old chap in my home town named William Brown (better known in Scottish angling circles as Wull Broon). I personally have fished with that grand old exponent of fly fishing on many occasions. I have seen Brown land trout up to 2½ pounds on horsehair as explained above.

Many times I have gone with him when all he had along in the shape of lures was an old cigar box full of the makings. I was a lad then, and my job was to shake the dry grass along the river bank until I scared out some fly or flies. He had a close mesh landing net which I used to swipe around until I captured a fly.

Pithole Creek in Venango County yielded this fine catch of brown and rainbow trout to Bruno Birsa of Oil City last season.

When such a capture was made the fly was killed by pressing its head only and the carcass was then set in a drinking glass body downward. Brown would set up his home-made vice and I would hold the glass and its contents over his head as he sat down to match the materials to duplicate it. The only colors Brown saw looking up through the glass were the colors the trout saw.

This job of matching nature as closely as possible was not done in a hurry, as the material to do the job had to be matched for color only after it had been wet. I learned then how useless it was to try to duplicate a natural fly with dry material and today when I attempt to duplicate a natural fly I always do it as Brown did. On behalf of all wet fly fishermen may I ask their critics, is there any science in wet fly fishing?

Let us step over to nymph fishing. I have read many articles on it, some with a great deal of pleasure and others with an equal amount of disgust.

Not so long ago I read of a fly fisherman who openly stated he would as soon fish with live bait as with nymphs. Another explained nymph fishing as follows: "The only practical way to fish a nymph is across and down." One advised: "Allow the water only to work your nymph. Do not agitate it." And yet another wrote: "Fish a nymph as you would a streamer."

If that were all there was to nymph fishing, I can assure you every trout stream within 100 miles of a large town would be entirely fished out. The nymph is the trout's most natural food It is my opinion the nymph is probably the one lure that cannot be fished by any set or given rule. I have taken some of my best catches on artificial nymphs but never by any fixed or concrete method. In nymph fishing I use a 12 to 14 foot tapered gut leader, tapered to 3x usually, but in very clear water and low water I use the same length of leader tapered to 4x.

Shadows must be avoided on real clear days and it is really better to fish towards the sun. This may call for fishing a nymph upstream and, by the way, that is my favorite way to fish nymphs. You can, of course, fish up and across, or across and down.

Last year on the AuSable below Grayling in New York State I was fishing a nymph upstream when a friendly chap on the bank approached and called "How's luck?"

I replied they were hard to take and he came right back with "What ya fishin'?"

"Nymphs," I answered.

"Why, that's no way to fish a nymph," he went on. "You should fish broken water, across and down."

I went out on the bank and chatted with this new-found friend and when he looked into my creel and saw 13 trout, ranging from 9 to 13 inches, he said with certainty, "You didn't catch those trout fishing nymphs that way."

He was merely relating what he had read and admitted he never had caught a trout on a nymph.

In fishing nymphs upstream one uses various methods. A small fly can be tied three feet from the nymph, which of course is tied on the end of the leader. This fly is not tied on with a view to catching anything but as a marker for your leader to tell

you where your nymph is. I use a size 14 or 16 dry fly as marker but make no effort to float it.

Carry the tip of your rod high and cast above as you would a dry fly. Strip line as in dry fly fishing, so there is virtually no slack. The second your guide fly stops or moves under you must strike, but this you cannot do unless you are carrying the rod tip high.

Some nymph fishers use dry fly grease on their gut leader all the way down from the line to fly (marker). This floats your leader and you strike the moment your leader starts under, but by this method, in my opinion, there is too much slack and most of your strikes will be lost.

Try a few casts over a likely nymph spot by the first method I explained and allow the water to carry the nymph naturally, alongside logs or over rough stones or rocks.

If you do not meet with success try a cast or two as follows before you move upstream: Cast as explained and allow the nymph to settle until the marker is just submerged. As the current catches your nymph give it a slight lift and then allow it to settle again and repeat until the nymph passes you. Nymphs come from the bottom and rise up and down in the water and such a movement copies their actions, but you must not forget to strip in slack as the lure comes toward you and to carry your rod tip high.

Fishing nymphs up and across one uses slightly different tactics. I usually cast across and about six feet upstream and the first few casts I simply allow the water to carry the nymph along. Keeping the rod tip high and ready to strike the moment the leader halts in the slightest degree, I allow the water on such casts to carry the nymph until my line straightens out below me. From that point on I hop the nymph with short, infrequent jerks (very slight) until the cast is completely fished out.

If a few casts like the above do not bring results try this: Cast up and across again and immediately the nymph settles under water start giving it a little lift, allow it to settle again, then repeat the lift and so on until the cast is fished out. Do not take the nymph out until you have completely fished the cast out, as many a trout will follow the lure almost to the shore before it will hit.

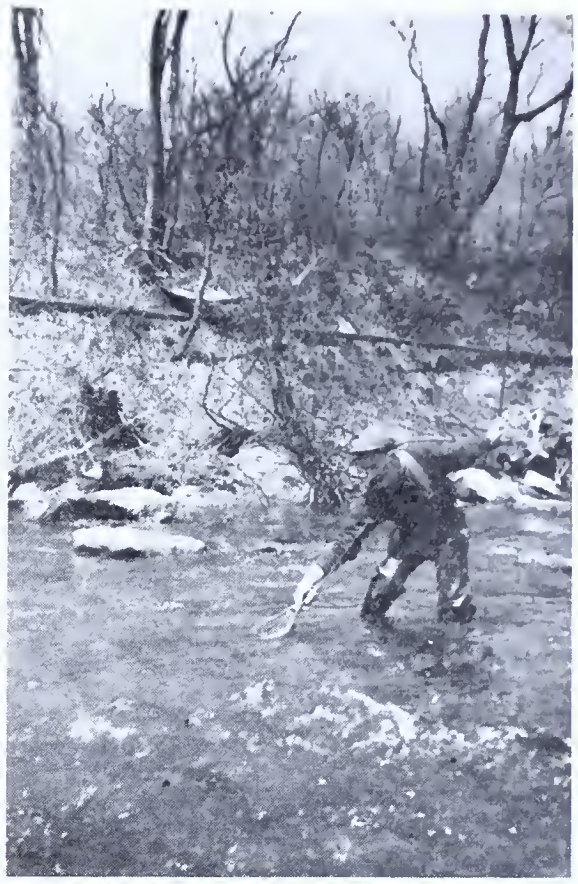
In extremely fast water or rising water I use a small buckshot but this practice is unnecessary unless the water is very swift.

Try nymph fishing if you doubt it is an art.

Various methods are used in streamer fishing and all of them will take fish. Sometimes not all in the same day, but one of them usually does the trick.

Across and down is the easiest way with streamers and with perseverance will take trout. Cast across and work the streamer according to how swift the water is. If it is very fast water cast across to begin with and work your lure very sparingly, with short jerks at intervals until the fly is directly below you. Then work it right up to the shore with short sharp jerks until it is almost beached. Do not forget to fish out each cast and carry the rod tip fairly low in such water.

If that doesn't take trout in fast water try this: Cast across and immediately start the streamer back, thus making it skitter on top. This aften produces many rises but it is not so effective in getting the fish. Carry the rod tip high in this cast.



Snappy action here as Bruno Birsa slips the landing net under a fine rainbow trout in Pithole Creek.

If that fails (and I am still talking about very fast water) try this one: Cast across and about six feet upstream, with a tiny buck shot about eight inches from the lure. Allow it to submerge deeply, then give a sharp upward lift. Allow it to submerge deeply again and repeat until the cast is fished out. One of these methods usually will get fish with streamers.

Under ordinary stream conditions or in quieter waters you can use the same procedure as above but you will have to work your fly a little faster, enough to give it the effect of a minnow trying to get into safe water.

I personally would not call it a day without trying the foregoing methods with streamers, because of one thing: It takes skill to work them but it pays dividends consistently in getting big trout.

The subject of bait fishing ought to disqualify me in the eyes of many trout fishermen and may cause more than one purist to laugh but, believe it or not, there is an art in fishing worms. Not by the old method of plunking, with a pound of lead and pint can of night crawlers, a heave-in and a wait-and-see.

I do not refer to such fishing although I do not begrudge the relaxation and no doubt the thrills such a method gives some old chap and also the many city dwellers who get only a few days on the stream or lake once a year. Such relaxation is a tonic to them and for my part I never will be one to condemn such fishing or to laugh at those who never had the chance to learn more scientific ways.

The artist with the worm is the fellow who knows how to fish it upstream. Here again an angler should use a 12-foot leader, tapered to 3x or on a bright, hot summer's day in very low water to 4x. The best hook for bait fishing I have been able to get is what is known as "penal tackle." It is made up of 2 hooks. I prefer size 14 fly hooks. The bottom hook is tied onto a 3x leader and about three-quarters of an inch further up the leader the second hook is tied on.

Care should be taken in baiting these hooks. Impale the worm about a quarter or an inch below its head on the top hook and twist the worm once around the leader. About one-quarter or one-half inch from the tail of the worm set the lower hook. I use only small garden worms or manure worms, about one inch to one and one-half inches long.

Using such a rig it is easy to see how the bait works. The worm can act naturally on account of flexibility of the gut and will remain alive indefinitely, since it is pierced in only two places by those small hooks and not killed almost immediately as is the case with a single bend hook on which it is strung from head to tail.

Fish do not have intellect but they do have natural instinct and as in all trout fishing we must keep the bait acting as naturally as we can. Very clear, low water in the heat of summer is the best time to fish by this method. That may seem odd to those of you who have never fished this way but such has been my experience.

In such low, clear water, I do not use any buckshot. Where the water is fast a small buckshot is necessary. You must be the judge as to whether the water warrants a small buckshot. I personally use the size found in a shotgun shell, but in fast water only.

Cast your worm with as much care as you would a dry fly and allow the water to work it around rocks and logs and down a clay or grass bank, but fish all sides and the middle directly above you. Here again, as in upstream nymph fishing, you must strip line as the lure comes toward you, without drag on the worm. Carry the tip of the rod high and strike on the slightest touch.

If you think there is no skill in worm fishing, just try this out. You'll be surprised.

Volumes have been written on the subject of dry flies and it is away beyond me to add one word to that already written, beyond saying it perhaps is the most fascinating of all trout fishing.

There is something about watching that floater sail along and the anticipation is tremendous. The average dry fly angler is an artist. He is a good sport, using the "lightest possible tackle." The trout has as good a chance as he has, but in that respect the dry artist is neither more nor less of a sport than the fellow using horsehair on wets or a 4x tapered leader with other lures.

What we all should do, in my opinion, is diversify our fishing and try to become scientific in all its branches. Too many of us pick our own favorite way as the only right way and criticize the other fellow's methods. That is all wrong. We should be broad enough and take time enough to study the other fellow's ways and methods before we criticize or condemn them.

There is one glorious fact remaining, that we are all members of the angling fraternity. As brothers of the rod we may scrap a little between ourselves, but the Lord keep the fellow outside our sport who condemns any branch of it. In that we are united. Let the password of the fraternity be: "Sportsmen All."

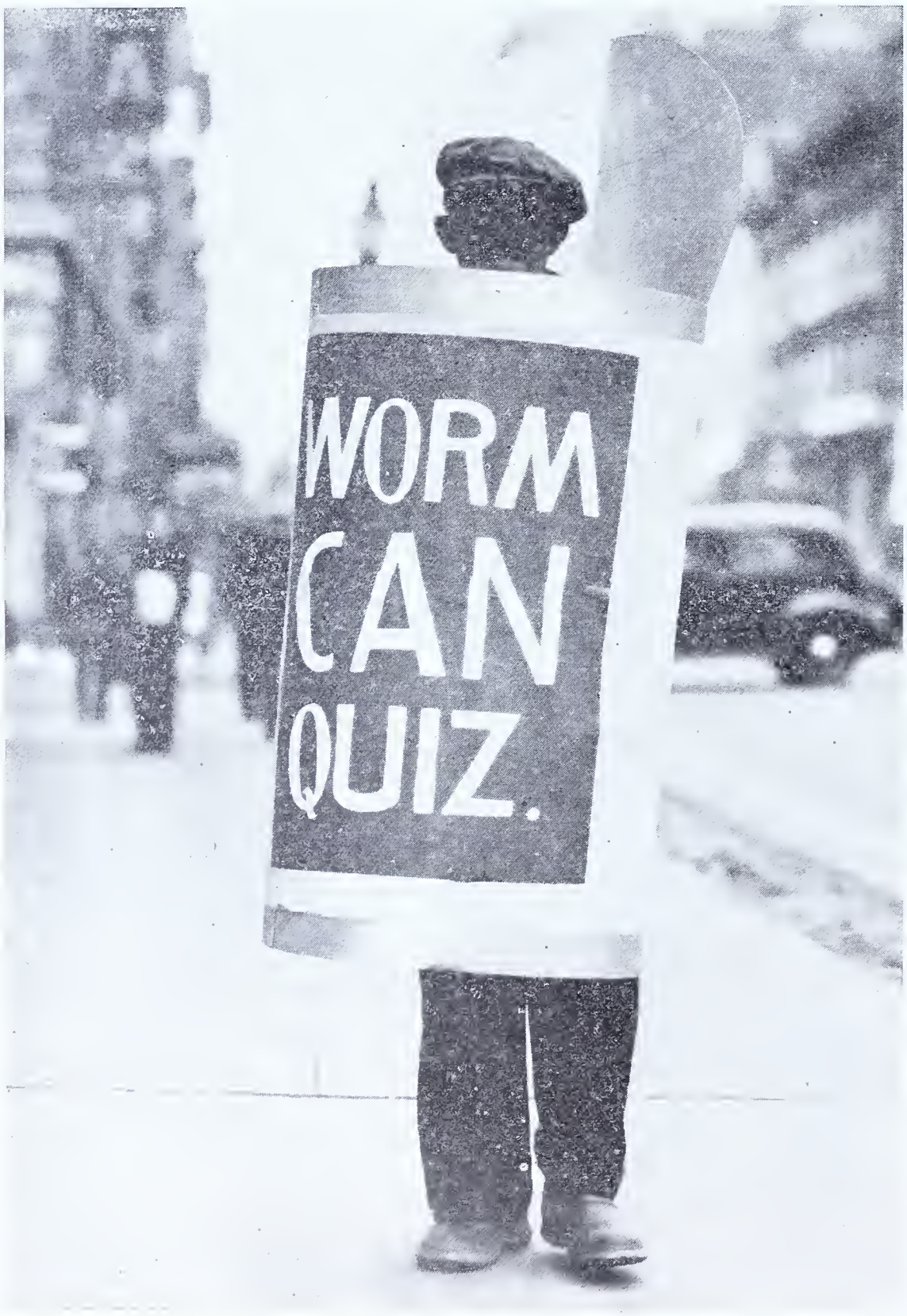
LANCASTER ANGLERS IN WORM CAN QUIZ

Did you ever see a worm can walking? Well, here's one seen promenading on a cold blustery day of January in the downtown section of Lancaster. People paused to look at this strange apparition, even automobiles slowed up to read the big white letters on the can, "Worm Can Quiz" and on the back of the man-size can an invitation to sportsmen to attend a meeting that evening.

The assembly attending the meeting of the Lancaster County Fish and Game Association was a buzz of curiosity. The Chairman announcing the Quiz said, "It was difficult to secure a quizzer for our contest this evening, but we finally obtained 'Little Horace' who has been fishing all day and consented to do it for us."

The audience turned their heads to see "Little Horace" come in the entrance whistling, fishing pole over his shoulder with a fish (celluloid) dangling from the line. He wore blue overalls, had his sleeves rolled up, wore a tiny straw hat held in place with a rubber band, and was bare-footed (imitation bare-feet over his shoes).

"Have you had your supper 'Little Horace'?" asked the Chairman. "No", the barefoot fisher-boy answered, "Mother sent me out to fish and I ain't been home yet—but I've got my bait", and he held up a can, reaching in pulled out a worm, held it above his mouth, devouring it as he would spaghetti. He offered some to the startled spectators, but none relished his meal, (strips of Lebanon Bologna). Little Horace then encouraged three women and two men to come up on the stage for the quiz.



Contestants withdrew numbers from a large worm can and were asked the question with a corresponding numeral. If the person could not answer, the group were asked generally.

"Do you know the difference when you hear a frog or a toad during the summer evenings?" The unsuspecting entree said, "Yes". "Little Horace" with a twinkle in his eye said, "Will you imitate a frog croaking?" The attempt was an embarrassed croak that set the audience laughing. It was all in good fun and questions continued that were simple, but tricky, and designed for humor. When it was all over, the judges quickly gave the scores of the five contestants. Each one was called to receive a small can with 1st Prize Worm Can Quiz, 2nd prize, etc., painted in gold letters on the label.

The other members chuckled, thinking that was the contestants reward, but the smiles of the five who had weathered the barrage of humor showed their appreciation of the prizes given them for selection according to their number on the prize winning cans. Everybody had fun and was in good spirits.

ONTELAUNEE CLUB ADDS TO TRACT

The Ontelaunee Rod and Gun club has purchased the former Turner property of about one acre at the foot of the Blue Mountain along the old Tamaqua road about three-fourths of a mile north of Raberts Corner in Lynn township and will be added to the club's original tract of 27 acres which it adjoins. The purchase was made by a committee appointed by the president, Deputy Sheriff Ernest Kistler, consisting of Homer Snyder, Levi Fatzinger and Clarence Snyder.

The purchase of the property adjoining the original gun club tract gives the club some new facilities. The house on the new tract will be converted into club quarters. There is also a garage and other outbuildings as well as a small stream which is to be stocked with fish.

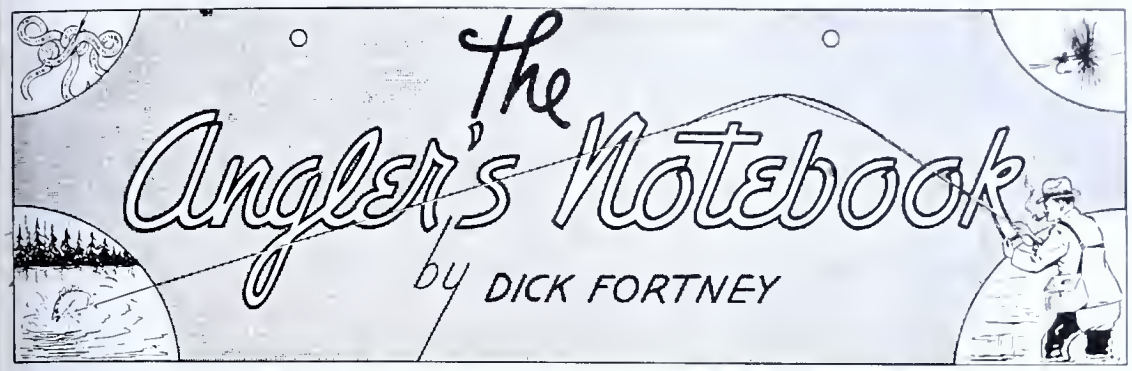
The club already had developed a picnic grove on its original tract and had built trapshooting and target ranges which have been in use for a number of years.

The club has a membership of 160 and for years has been active in the stocking, propagation and feeding of animals and birds in the Blue mountain region. This work is to be carried on in larger degree in the future. In order to accomplish this the club will conduct a membership campaign.

TIOGA SPORTSMEN TO RAISE RINGNECKS

The Asaph Sportsmen's Club held its regular meeting on February 12 at the Asaph Grange hall. The important item of the meeting was plans for raising ringnecks for the coming season. After considerable discussion it was decided to order 400 baby chicks and to erect a brooderhouse to care for same. President Milan R. Butler gave a report on the State Federation meeting in Harrisburg.

Following the regular business the following men were elected as officers for the coming year: President, John Compton; vice-president, Arthur Confer; secretary-treasurer, William Doyle.



In getting the tackle box ready for serious fishing ahead, give a close inspection to leaders, snelled hooks, and flies that have been lying in storage all winter. Many of them will be found to be defective and had best be thrown away. Keep a sharp watch for rusted spots on hooks, for frayed places on leaders and hook snells, and for flies that show evidence of the work of moths. It is better to replace them now than to lose a nice fish some day on the stream.

Bait fishermen can get along without a leader, it is true, but even worm fishing will improve if the angler uses at least three feet of gut between the line and the hook. Later in the season, when the streams are lower and the water clearer, it's not beyond reason to use a leader six or even nine feet in length.

Trout should never be wetted after they are taken from the water and placed in the creel. Soaking will make the flesh flabby and soggy and create slime. Clean the fish, wash them inside, dry them with a soft cloth, then place them on their backs in the creel, using damp dock leaves or moss as a bedding.

Local conditions govern the selection of trout flies, but for wet fly fishing sizes 4 and 6 are large, sizes 8 to 10 are medium, sizes 12 and 14 are small, and "tinies," or very small, run all the way to size 22, which is not much larger than an anemic mosquito but which just the same is very effective under certain conditions.

The best nails for wading shoes are of soft iron, since they grip better than nails that are made of hard steel.

Cold hands annoy fishermen, yet gloves are a nuisance when it comes to handling delicate fishing tackle. An old-timer suggests that an application of heavy machine oil will do much to protect the fingers from the cold of raw, rainy spring days.

Soak the wet fly along with the leader before using it. A wet fly is not effective unless it sinks, and the more it is soaked the quicker it will begin to function properly in the stream.

In fishing a swift riffle with a worm, cast diagonally upstream, then quickly strip off line and follow the drift of the bait with the tip of the rod as the current pulls the slack line through the guides. This action permits the bait to drift with the current and to sink toward the bottom without the drag of a tight line. The more swift the current, the more line has to be stripped off if the bait is to move any distance without being pulled to the surface of the water.

If you catch a nice fish at one certain spot in a stream, go back to that selfsame place later, and the chance is that you will hook another. Fish think alike when it comes to selecting spots for feeding, and when one fish is removed from such a place another quickly takes its place. A certain sunken log on Lycoming Creek, in Lycoming County, yielded us five fine bass during a single summer.

Springs at the bottom of a stream always attract fish. In summer the water is cooler there, and in winter, strange as it may seem, the water is warmer. One afternoon on Wyalusing Creek, in Bradford County, the writer caught a fine mess of bass by casting a lure at a clump of weeds sticking up in the middle of a shallow hole. Later a farmer revealed that there is a cold spring in the hole just at the spot where the weeds were growing.

A gentle tightening and slackening of the line is the signal of a carp bite. The fish must be given plenty of time to work the bait into its mouth, and the time to strike is when the fish begins a steady run with the lure. The hook should be set firmly, for the carp is a hard battler.

A good way to toughen worms: Put them in bran for about six hours (longer will be apt to kill them); then take them out and put them in damp moss. They can be used within an hour after this treatment.

It's always wise to fish a pool upward from the lower, or downstream, end, moving toward the head of the pool rather than to float a fly or bait down into it. This maneuver gives the angler a chance to cover the best water before it is disturbed.

The perfect wet fly should have light wings, an extremely slim body, and sparse hackles. Another point: The hackle should lie well back toward the point of the hook.

A new use for discarded woolen socks will prove a boon to worm fishermen who dislike carrying tin cans. Merely place the worms in a sock and attach it to the belt. The worms will remain alive much longer than if they were carried in a can.

Do not allow the fishing rod to lie on the ground. Dampness and the fragility of the rod in contact with heavy boots are obvious reasons. Dampness will very quickly ruin even the very best rod—if it lies long enough without being broken by folks walking around near it.

Fish early in the mountain streams for trout, for a bit later in the season they will be pretty shallow and clear and the trout will be wary. This angler is "worming" for trout on Hoagland's Run, a tributary of Lycoming Creek, in Lycoming County.

TROUT STREAMS STOCKED WITH LEGAL TROUT

In answer to numerous requests, the ANGLER lists the following streams in Pennsylvania stocked with legal size trout for the coming season. This covers only major waters in the various counties. Other smaller streams are also scheduled for stocking.

Adams County

Brook trout: Carbaugh Run, Toms Run, Little Marsh Creek; rainbow trout, Chambersburg Reservoir; brown trout, Conewago Creek, Middle Creek and Conococheague Creek.

Forest, Warren, Elk & McKean

(Allegheny National Forest)

Brook and Rainbow trout, Bear Creek and Big Mill Creek; brook trout, Beaver Run, Blue Jay Creek, Brown Run, Little Coon Creek, Farnsworth Creek, Four Mile Creek, Minister Creek, Ross Run, Six Mile Run, N. Br. Sugar Run, Two Mile Run and Wilson Run; brown trout, East Hickory Creek, E. Br. Tionesta Creek, S. Br. Tionesta Creek, W. Br. Tionesta Creek, W. Br. Tunenegwant Creek; brown and rainbow trout, Salmon Creek; rainbow trout, Chappell Fork, Millstone Creek, and Spring Creek.

Beaver County

Rainbow trout, Brady Run; and Brown and Rainbow Trout, Big Traverse Creek.

Bedford County

Brook trout, Beaver Creek, Deaner Gap Run, Flintstone Creek, Maple Run, Potter Creek, and Beaver Run; rainbow trout, Koon Lake; brown trout, Bobs Creek, Cove Creek, Cumberland Valley Run, Imlertown Run, Raystown Br. of Juniata River, Shermans Valley Run, Yellow Creek and Wills Creek.

Berks County

Brook trout, Back Creek, Mill Creek, Moslem Creek, Mill Creek, Northkill Creek, W. Br. Pine Creek, Swamp Creek and Furnace Run; brook and rainbow trout, Furnace Creek; rainbow trout, Manatawney Creek; brown and rainbow trout, N. Br. Perkiomen Creek, and brown trout, Hay Creek.

Blair County

Brook trout, Bells Gap Run, Blair Gap Run, Bobs Creek, Sinking Creek and Van Scoyoc Run; brown trout, Bald Eagle Creek, Canoe Creek, Clover Creek, and Piney Creek.

Bradford County

Brook, brown and rainbow trout, Schrader Creek.

Picturesque fly water on the Brodheads Creek, Monroe County.

Bucks County

Brown and rainbow trout, Mill Creek; and brook trout, Cooks Creek.

Butler County

Brown trout, N. Br. Slippery Rock Creek and Little Connoquenessing Creek; brown and rainbow trout, Bear Creek, Silver Creek, and Thorn Creek.

Cambria County

Brook trout, Beaverdam Run, Bender Run, Bens Creek, S. Br. Blacklick Creek, Cedar Run, Beaverdam Run, Duclós Run, S. Fork Lt. Conemaugh River, Big Laurel Run, and Noels Creek; brown trout, N. Br. Blacklick Creek, Chest Creek, Clearfield Creek, and Slatelick Run; rainbow trout, Curtis Run and Ebensburg Water Co. Dam.

Cameron County

Brook trout, Brookes Run, Clear Creek, Hicks Run, E. Br. Hicks Run, Hunts Run, Upper Jerry Run, Lick Island Run, Lushbaugh Run, Mix Run, Portage Creek, Sterling Run and Wykoff Run; brown trout, Driftwood Br. Sinnemahoning, Portage Creek.

Carbon County

Brook trout, Aquashicola Creek, Drakes Creek, Fawn Creek, Hunter Run, James Run, Lesley Run, Mauch Chunk Creek, Pine Run, and Stoney Creek; brown and rainbow trout, Mud Run, and Pohopoco Creek; brook and rainbow trout, Big Bear Creek and Quakake Creek; brook and brown trout, Hayes Creek.

Centre County

Brook trout, Benner Run, W. Br. Big Run, Black Bear Run, Fields Run, Lt. Fishing Creek, Laurel Run, Big Sandy Run, Lt. Sandy Run, and White Deer Creek; brown trout, S. Fk. Beech Creek, Cold Stream, Marsh Creek, Poe Creek, Sinking Creek, and Six Mile Run; rainbow trout, Poe Valley Dam; brook, brown and rainbow trout, Elk Creek, Lt. Moshannon Creek, Penns Creek, and Spring Creek; brook and brown trout, Pine Creek; brown and rainbow trout, Bald Eagle Creek and Logan Branch.

Chester County

Brook trout, Beaver Run, Lt. Broad Run, Doe Run, Indian Run, Mathews Run, and West Valley Creek; brown trout, French Creek, and M. Br. White Clay Creek; brook and rainbow trout, Birch Run, and Valley Creek; brook and brown trout, White Clay Creek; brown and rainbow trout, Officers Run.

Clarion County

Brook trout, Canoe Creek, Lt. Piney Creek, and Lt. Toby Creek; brook and rainbow trout, Deer Creek and Toms Run; brown and rainbow trout, Mill Creek.

Clearfield County

Brook trout, Anderson Creek, Bilger Creek, Curry Run, Deer Creek, Gifford Run, Hockenberry Run, Hazelett Run, Mix Run, Montgomery Creek, Moshannon Creek, Mountain Run, Sawmill Run, Upper Three Runs, Trout Run, Whiskey Run and Wilson Run; brown trout, Bell Run, Lick Run, Mosquito Creek, Sugar Camp Run, N. Wilmer Run and South Wilmer Run; brown and rainbow trout, Laurel Run.

Clinton County

Brook trout, Antes Crek, Beaverdam Run, Big Run, M. Br. Big Run, Swamp Br. Big Run, Birch Island Run, Cedar Run, Cooks Run, Hammersley Forks, Hyner Run, Rattle, snake Run, Sandy Creek, and Trout Fork; brown trout, Lick Run, Paddys Run, Tangascootack Creek, N. Br. Tangacoostack Creek, Young Woman's Creek, R. Br. Young Woman's Creek and W. Br. Young Woman's Creek; brook and rainbow trout, Kettle Creek, and Baker Run; brook, brown and rainbow trout, Big Fishing Creek.

Columbia County

Brook trout, Coles Creek, Lick Run and West Creek; brown trout, Mugser Run; brook and brown trout, Roaring Creek; brown and rainbow trout, Fishing Creek.

Crawford County

Brook trout, McKaughlin Run; brown trout, Lt. Sugar Creek and Thompson Run.

Cumberland County

Brook trout, Alexandra Run; brown and rainbow trout, Big Spring, Letort Spring, and Yellow Breeches; brook and brown trout, Mountain Creek; brook and rainbow trout, Trindle Spring; rainbow trout, Furnace Run Dam.

Dauphin County

Brown trout, Manada Creek, N. Fk. Powells Creek, and S. Fk. Powells Creek; brook and rainbow trout, Stoney Creek; brown and rainbow trout, W. Branch Rattling Creek.

Delaware County

Brown trout, Ridley Creek.

Elk County

Brook trout, Belmuth Run, Big Run, Crooked Creek, Hicks Run, E. Br. Hicks Run, Island Run, Kersey Run, W. Br. Kersey Run, Laurel Run, Maxwell Run, Medix Run, Mix Run, Paige Run, Spring Creek, Straight Creek, S. Br. Straight Creek, Vineyard Run and Wolf Lick Run; brown trout, Driftwood Branch; brown and rainbow trout, E. Br. Clarion River, W. Clarion Creek and Trout Run.

Erie County

Brown and rainbow trout, Beaverdam Run, Conneautee Creek, Lt. Conneautee Creek and S. Br. French Creek; rainbow trout, Pleasant Lake.

Fayette County

Brook trout, Back Creek, Beaver Run, Buck Run, Laurel Run, Mill Run, Morgan Run, Mountain Creek and S. Fk. Mountain Creek; brown and rainbow trout, Dunbar Creek, and Big Meadow Run; brown trout, Big Sandy Run.

Forest County

Brook trout, Lt. Hickory Creek, and Tubbs Run; brook and rainbow trout, Coon Creek and Hemlock Creek; brown and rainbow trout, W. Hickory Creek and Maple Creek.

Franklin County

Brook trout, Bear Valley Run, Broad Run, Dennis Creek, Red Run, Trout Run, and Trout Run; brown trout, E. Br. Lt. Antietam Creek, Conococheague Creek, W. Br. Conococheague Creek and Muddy Run; rainbow trout, W. Br. Antietam Creek.

Fulton County

Brook trout, Brush Creek, Lt. Brush Creek, South Brush Creek, Oregon Creek and Wooden Bridge Creek; rainbow trout, Cowans Gap Dam; brown trout, Lt. Augwick Creek.

Huntingdon County

Brook trout, Laurel Run, West Licking Creek, Nine Mile Creek and Saddler Creek; brown trout, Black Log Creek, and E. Br. Standing Stone Creek; brook and brown trout, Spruce Creek; brown and rainbow trout, Standing Stone Creek; rainbow trout, Whipple Dam.

Indiana County

Brook trout, S. Br. Twolock Creek and Lt. Yellow Creek; brook and rainbow trout, Laurel Run; brown and rainbow trout, Yellow Creek.

Netting trout from one of the pools at the Corry trout hatchery in Erie County for stocking.

Jefferson County

Brook trout, Callen Run, Camp Run, Coder Run, Horam Run, and Mill Creek; brown trout, Big Run, N. Fk. Red Bank Creek, S. Fk. of N. Br. Red Bank Creek and Lt. Sandy Creek; brook, brown and rainbow trout, Clear Run; brown and rainbow trout, Mill Creek and Lt. Mill Creek.

Juniata County

Brook trout, Horning Run and Liberty Valley Run; brown trout, Horse Valley Run, Licking Creek, Lost Creek and Willow Run.

Lackawanna County

Brook trout, Choke Creek and W. Br. Wallenpaupack Creek; brown and rainbow trout, Lehigh River and S. Br. Tunkhannock Creek; rainbow trout, Roaring Brook.

Lancaster County

Brook trout, Lt. Conestoga Creek, Donegal Creek, Hammer Creek, Middle Creek, Long Run, Muddy Run, Pequea Creek, Rock Run, and Trout Run; brown trout, Big Chickies Creek and Fishing Creek; brown and rainbow trout, W. Br. Octoraro Creek.

Lawrence County

Brown and rainbow trout, Big Run, Deer Creek and Hickory Run; brown trout, Taylor Run.

Lebanon County

Brook trout, Bachman Run, Indiantown Creek and Snitz Creek; brown trout, Evening Branch, Gold Mine Run, Hammer Creek, and W. Br. Hammer Creek.

Lehigh County

Brook trout, Big Trout Run, Cedar Creek, Iron Run, S. Br. Saucon Creek and Swabia Creek; brook and brown trout, Lt. Lehigh River; brown and rainbow trout, Jordan Creek; rainbow trout, Mountain Creek; brown trout, Trout Creek.

Luzerne County

Brook trout, Arnolds Creek, Balward Run, Bowman's Creek, Maple Creek, Phillips Creek, Pine Creek and Shade Creek; brook, brown and rainbow trout, Wapwallopen Creek; brown and rainbow trout, Lehigh River, and Lt. Wapwallopen Creek; brown trout, Harveys Creek, Huntingdon Creek, Kitchen Run, Linesville Creek, Lt. Nescopeck Creek, Lt. Shickshinny Creek and Wrights Creek.

Lycoming County

Brook trout, Lt. Bear Creek, Black Hole Creek, English Run, Fourth Gap Run, Hogland Run, McMurrin Run, West Mill Creek, Lt. Muncy Creek, Upper Pine Bottom Run, Plunketts Run, Trout Run and Trout Run; rainbow trout, Rock Run; brown trout, Blockhouse Creek, Grays Run, Larrys Creek, Loyalsock Creek, Lycoming Creek, Muncy Creek, Lt. Pine Creek, Roaring Branch, Spring Creek, Wallis Run and White Deer Hole Creek.

McKean County

Brook trout, Bell Run, W. Clarion Creek, Comes Creek, Five Mile Run, Seven Mile Run; brown trout, Marvin Creek and Potato Creek; brown and rainbow trout, Portage Creek.

Mercer County

Brown trout, Lackawanna Creek, Mill Creek, Mill Creek, E. Br. Wolf Creek, N. Br. Wolf Creek, and W. Br. Wolf Creek; brown and rainbow trout, Deer Creek, Lt. Neshannock Creek and W. Br. Lt. Neshannock Creek.

Mifflin County

Brook trout, Havice Run, Laurel Run, Lingle Run, and Treaster Valley Creek; brown trout, New Lancaster Creek, Honey Creek and Licking Creek; brook, brown and rainbow trout, W. Br. Kishacoquillas Creek.

Monroe County

Brook trout, Aquashicola Creek, Buckwa Creek, Cherry Creek, Dotter Creek, Forest Hill Creek, Kettle Creek, Lake Creek, McMichaels Creek, Middle Creek, Mixsel Creek, Pensyl Creek, and Scott Run; brook and brown trout, Big Bushkill Creek and Pohopoco Creek; brown trout, Middle Brodheads Creek, Pocono Creek and Tunkhannock Creek; brown and rainbow trout, Brodheads Creek, Tobyhanna Creek and Lehigh River; rainbow trout, Snow Hill Dam and Weir Lake.

Montgomery County

Brown trout, Deep Creek and Mill Creek.

(Continued on Page 30)

FAIL TO AGREE ON SPRING CREEK OPENING

Although a three-hour meeting of the Spring Creek Land Owners' Association members and representatives of the Centre County Federation of Sportsmen's Clubs was held at the Guy Stearns home near Lemont no agreement for removing the fishing ban on Spring Creek was reached.

Following another owners' meeting, the date of which was not decided, representatives of the county sportsmen's groups will again hold a combined meeting with the residents along the stream.

It was agreed by the Spring Creek Association that delegates from the affiliated clubs of the county sportsmen's federation would be present at all other meetings.

Among the proposed regulations discussed was that of Sunday fishing, which never has been permitted on the Rock-Oak Hall area of the stream.

Regulating the hours of fishing was also brought up as one of the means of controlling nuisances in the area.

Prohibiting the building of camp fires and camping on private properties was also given consideration in the list of rules discussed.

Erection of stiles by conservation associations and vigilance on the part of the organization members regarding destruction of property were discussed. The representatives of the various groups favored such a move and assured co-operation of their individual organizations.

Here is Latort Spring, Cumberland County trout stream fed by limestone springs as it appeared to the photographer on February 14 this year. Year round high water temperature keeps it virtually free of ice.

LITTLESTOWN CLUB SPONSORED SHOW

One of the most active organization in the State is the Littlestown Fish and Game Association of Adams County.

At their January meeting all officers were re-elected which follow: President, Harry O. Harner; First Vice-President, Ernest C. Renner; Second Vice-President, W. E. Stites; Secretary, Walter Crouse; Treasurer, Clarence Schwartz.

The club has fostered many projects since organization in 1937. Among their activities has been cooperation in the farm game program; distributed over farm land nearly 1000 rabbits for restocking, and approximately 250 pheasants; raised and released 25 pair quail; and stocked small streams of the county with Bluegill sunfish and smallmouth black bass.

Perhaps their first really big undertaking was the sponsoring of the Farm and Game Show, in cooperation with the farmers, which proved to be one of the most outstanding events held here.

During the coming year they plan to erect a recreation building near town, which will house an indoor rifle range, and the surrounding land will be used as a game refuge.

The club in the past years has held a banquet in the fall, but plans are now underway for their first spring banquet which they hope to make an annual affair.

The club is most fortunate in having had since its inception a secretary who has been most faithful and one of the hardest workers and would like to take this opportunity to show their appreciation to their secretary, Walter Crouse.

Sherman's Creek, a typical central Pennsylvania warm water creek, in the grip of winter ice. This photo was taken on February 9 this year.

KILLED 25 WATERSNAKES

Writes Charles Reichelderfer of Tamaqua: Killed 25 watersnakes last season. The largest snake I shot was four feet long and two inches in diameter. At least I know this will save me a lot of trout for the coming season and I wish every fisherman would do the same. My buddy, Ed. Brode, also bought himself a .22 rifle for watersnake killing last season.

ISELIN ANGLER TAKES BIG TROUT

Said to be one of the most consistent takers of big trout in the state is Joseph Patrick, Jr., of Iselin, Indiana County.

Patrick was raised in the vicinity of Black Moshannon Creek in Centre County. In addition to fishing fly, he also is an expert minnow fisherman and on occasion uses grasshoppers and crickets. His pet streams include Spring Creek, Logan Branch of Spring Creek, Bald Eagle Creek, and Black Moshannon Creek in Centre County.

HIGHLIGHTS IN PROGRAM OF PIONEER FISH AND GAME

The Pioneer Fish and Game Protective Association was organized in Allentown in 1935 and in the ensuing five years has increased its membership to a peak of 891. The success that the organization now enjoys can largely be attributed to the time and efforts of Harry Paff, who up until this year served as the organization's President. In reviewing the minutes of the organization for the past year, following are the highlights of the organization's efforts and accomplishments in behalf of the sportsmen and citizenry as well of Allentown and Lehigh County.

January, 1939, saw the inauguration of a rabbit trapping campaign within the Allentown City limits that accounted for 127 rabbits trapped and released in open territory. This year sees a continuation of that program profiting by the experience gained in the initial attempt.

The Club's standing order of 4,000 trees annually were purchased and planted in Weisenburg Township along the Jordan Creek. Boy Scout Troop under the supervision of Howard Stump and Leo Bateman, co-chairmen of the Forestry Committee, did the planting.

The organization in addition to distributing the fish and game allocated to the territories controlled by the club, assisted in the removal of thousands of fish stranded upon the drought affected portions of the Jordan Creek.

Recognizing the value of providing recreational centers for underprivileged boys, the Pioneer Club contributed $10.00 to the boys' club of Allentown organization fund.

Materials for the construction of bird houses were furnished by the Club to prison inmates.

A lifetime membership to the organization was extended to all members of three years or more, 65 years of age or over.

As a conservation measure, the Pioneer Club took the initiative and obtained property owner consent and the cooperation of the City of Allentown Parks Department in closing the Jordan Creek to all fishing until the opening of the trout season. A delicate situation through intelligent publicity and diplomatic approach was very well handled to the satisfaction and benefit of all fishermen concerned.

Several bits of legislation affecting the sportsmen which received the active support of the organization last year was one, the Tallman Bill, which called for a fifty cent increase in the fishing license fee. Two, endorsed Federal Pollution control as provided for in the Mundt Bill (HR-7971).

To assure all sportsmen of the opportunity of voicing their opinion on the Federation's proposed night fishing, pre-season fishing in trout streams, and aquatic life removal from trout streams, movement, the Pioneer Club conducted a meeting open to the public. In line with this policy the organization, learning of the dissatisfaction among leasees of property under the control of the Pennsylvania Department of Forests and Waters, profferred its offices to coordinate the complaints of said leasees and assist in a settlement of the controversy.

The cooperation and support of the District Attorney of the County was obtained to assist the Game Warden in controlling the indiscriminate shooting of small bore rifles by minors along the streams on the City's outskirts.

Once there was a girl who was staying at a hotel, and she phoned the desk clerk that there was a rat in her room. "Make him come down and register," replied the clerk.

Officers of the Pioneer Fish and Game Protective Association of Allentown for 1940. Left to right, James Biery, vice president, James Savage, financial secretary, C. Robert Glover, recording secretary, William Talbot, president, and Leo Bateman, treasurer.

REPORT WATERSNAKE DRIVE SUCCESSFUL

The Annual Meeting of the West Chester Fish and Game Association was held in the Municipal Building, West Chester, on March 4th, and a capacity crowd was in attendance.

The Secretary read the minutes of the previous meeting, and the Treasurer's report showed a healthy balance.

Roland S. Grubb, Esq., was re-elected as President; Vernon L. Hoffman, Vice-President; Fred C. Dutt, Secretary; and C. Eugene Walton, Treasurer. For the Executive Committee for a two-year term, the following members were elected: Joseph S. Webb, Hayes Battan, Harold W. Tate, Brinton Ross and Harry Singer.

President Grubb gave a detailed report of the activities of the Club during the past year, commenting particularly on the healthy condition of the Club and the interest of the members. He suggested that the members keep in mind the stream improvement work being carried out on Little Valley Creek and when weather permits, the work will be continued.

During the year a water snake killing contest was held by the Club, with the idea of conservation of fish. Five cents per head was offered to youngsters for each snake killed, resulting in a total of 463 snake heads being presented. In this connection, the Club secured from the Fish Commission, State Conservation Badges for the youngsters killing ten or more.

Alfred Penrose, Chairman of the Game Restocking Committee, submitted his report of game stocked during the year, which included 170 pheasants raised by the Club.

Marshall T. Brown, Chairman of the Fish Restocking Committee, reported that through the cooperation of the Fish Commission we had received a liberal stocking of trout, bass, catfish, bream and minnows during the past year.

President Grubb reported that the pollution problem has been vigorously followed during the past year, with gratifying results.

The meeting was then turned over to Prof. John C. Johnson of West Chester, who gave an interesting talk on conservation in connection with all forms of animal and plant life, illustrating his talk with pictures taken in the West.

NURSERY WATERS

The Fish Commission announces closing of the following streams as trout nursery waters to and including July 31, 1943.

McKean County—North Fork of Colegrove Brook, or Nigger Run, tributary to Colegrove Brook. Four miles of stream.

Potter County—East Fork of First Fork of Sinnemahoning Creek, to be closed from Camp Beaver, where Route 52001 leaves the main stream going toward Cherry Springs, to the headwaters.

Stonelick Run, tributary to the East Fork of First Fork of Sinnemahoning Creek, to be closed from bridge on Route 52001 to head of stream.

Birch Run, tributary to East Fork of First Fork of Sinnemahoning Creek, to be closed from Wycoffff's line to the head of the stream.

Middle Atlantic Casting Club Notes

At the last meeting of the delegates it was decided to hold the annual casting tournament on Sunday June 9th. A grounds committee was appointed to visit Willow Grove Park at an early date and select the best possible sites for the necessary events. Mr. VanDergriff of the Pennsylvania Fish and Game Protective Association spoke on the necessity of having the different courts all laid out as close together as possible in order that the gallery could view the different events without walking all over the park. Surf casting seems to present the main difficulty due to the large amount of room needed for the lead heavers to do their stuff. The Park Management is giving excellent cooperation and have placed their complete publicity department at the disposal of the association. With the exception of the weather they guarantee that all conditions will be just right for casting.

Mr. Arthur Clark o tfhe Holmesburg Fish and Game Protective Association was placed in charge of membership.

DOVER FISHING CLUB OF PHILADELPHIA

The Moving Pictures shown at the March meeting of fishing and big game hunting in Alaska were exceptionally interesting and educational. Mr. E. Bud Marter of Edgewater Park, N. J. who supervised the taking of the pictures, was the projectionist and also acted as commentator and told of some wonderful fishing in America's Last Frontier. The next meeting of the club on April 17th will be the annual Base Ball Night with the current American League Picture on the screen. Several old time ball players including Ira Thomas and Chief Bender will address the members.

The official date for the intraclub casting tournament has been set for May 12th. As usual this will start the regular Wednesday night casting practice at Cedar Park Field which will continue throughout the summer concluding with the Club's sanctioned tournament in September.

Entries are coming in early for the Prize Fish Contest held annually for members only; competition in this contest promises to be the keenest in years.

HOLMESBURG FISH AND GAME PROTECTIVE ASSOCIATION

From the enthusiasm shown by the members of this club in their early spring casting practice it looks as though there will be a lot of scientific anglers whipping the streams in this section of Pennsylvania with the opening of the Trout and Bass seasons. The Plug Casters are going to work in earnest on the ⅝ oz. accuracy courts and some really good scores have been chalked up. With spring weather now assured the casting field in back of the Club House offers excellent recreation and good sport for members who want to get tuned up for the approaching season.

The improvements to the club house during the winter have added much to its comfort and attractiveness and the rifle range erected several years ago by the members has been put in first class condition by the local police department who are now sharing it with our club in their efforts to attain perfect marksmanship.

The secretary is busy arranging the annual field day, the actual date to be announced later, sporting events to include fly, bait, and surf casting; archery contests, pistol shooting, and skeet will all be on the program.

LOWER MERION ROD AND GUN CLUB

The Lower Merion Rod and Gun Club will hold its regular monthly meeting on the evening of Wednesday, April 17th, at 8 o'clock P. M., in the American Legion Hall, Narberth. Following the business meeting, there will be moving pictures of interest to our sportsmen and refreshments will be served. This Club will hold its Annual Spring Picnic and Outing early in June on the farm of William D. Ridgway in Bethayres. In addition to the usual picnic on that occasion, such events as fly, bait and surf casting, as well as trap and small bore shooting, will furnish an opportunity for the Club members and their friends to display their skill.

PENNSYLVANIA FISH AND GAME

At the Philadelphia Sportsmen's Show this year the club's plug casting team won first place in the ⅝ oz. plug casting event. Those casting with the team were Raymond Neirle, Hobart Lavin, George DeGorgue, Charles Stocker, and Thomas Greedwood. The individual championship for the same event at this show was won by our fellow member George DeGorgue. The boys are practicing two nights every week and expect to be in fine shape by the time the outdoor Spring Tournaments are held.

REVIEW FOR BEGINNERS

(Continued from Page 9)

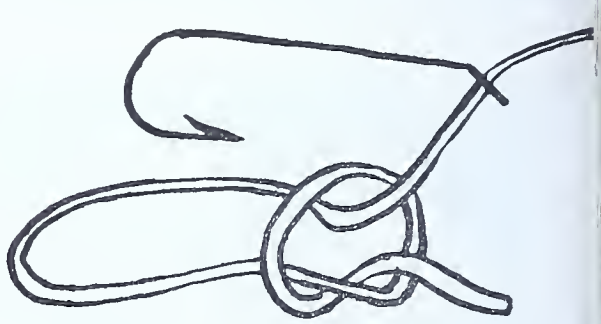
out downstream you begin a retrieve with a slow, swimming motion against the lesser currents.

This is by no means a thorough coverage on all the methods of fishing this lure but is something on which the beginner can start.

There is practically no end of methods to try and only by the trial and error method will you ever learn to execute the most effective methods. Book learning helps but only actual experiences complete the course and fortunately experiences never cease.

Dry Flies

So much has been written about this type of fishing that it seems to me that only the fundamentals should be mentioned here. Dry or floating flies are artificials tied to repre-



4—Turle Knot (Loose).

sent (we hope) the natural adult aquatic insect. The materials used in making them and the way they are constructed help in making them a floating product. To further their bouyancy, a floatant of oil or grease is applied to them.

Besides hundreds of standard patterns named for insects, streams, originators, etc., there are styles such as Bi-visibles, spiders and variants. The most difficult task confronting the beginner therefore is the selection of a group of dry flies which will bring at least moderate success and still be easy on the pocketbook. A few standard patterns in sizes 12 and 14, some plain hackle patterns in sizes 16 and 18 and a small selection of spiders and variants should suffice. In fact the beginner might do well to purchase only a few bi-visibles to start, say black, brown, grey, white and yellow in sizes 12, 14

APPLICATION FOR MEMBERSHIP

Mr. Arthur Clark,
9 Kirkwood Ave.,
Fox Chase Manor, Pa.

Enclosed find $5.00 covering the application fee for affilliation with the M. A. A. C. C. Kindly send full instructions.

Name of Club.....

Headquarters .....

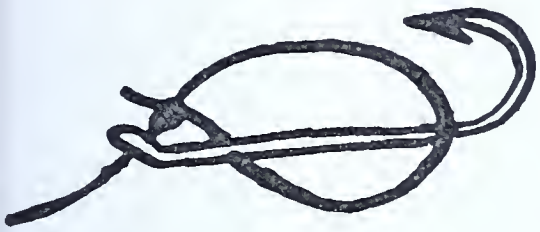
Secretary's Name .....

Mailing Address .....

If this application is accepted the amount enclosed will apply as the first year's dues. Otherwise it will be refunded.

and 16. These latter flies float well and are easily seen and are to be highly recommended for beginners. Most every experienced angler carries them, which fact alone attests to their merits, in my opinion. After he has mastered these well hackled flies, the tyro can then turn to the former list.

For general conditions a leader of nine feet tapered to 3x is to be desired. Shorter or longer ones can be used according to conditions but rarely should it be necessary to use a heavier tippet than 2x.



5—Put hook through loop.

Drag is the bug-a-boo of the dry fly fisher. It is caused by the fly floating on current which is faster or slower than that on which the line and leader are drifting. This can usually be remedied by studying the currents before casting and using a shorter cast.

No other kind of trout angling can boast of a greater number of purists than dry fly fishing. To many it is the most exciting of all methods. It is my personal opinion that too much time is spent in trying to take trout on dry flies when some other method would be much more effective. Therefore, I

6—Jam loop tight at hook eye.

believe the beginner should be admonished to do all in his power to refrain from becoming a purist, regardless of whether it be wet, dry, or what have you.

Nevertheless there are times when the fish are feeding on the surface only and are extremely selective. At such times a good selection of different sizes in several shades are a necessity. The times you'll remember longer are those when you took a few fish through figuring what the fish wanted. These days will be remembered long after those when any fly in the box would take fish.

Through these pages we have tried to convey to you the necessities and activities for taking trout with artificial flies. It must be understood that we have only attempted to give you advice which we hope will start you on the right path to successful and enjoyable trout angling.

Actual experience will teach you much more than volumes of reading material can ever accomplish.

We may ridicule and condemn the fools, but how dreary and monotonous life would be without them!

VETERAN WARDEN DIES

In the recent passing of Harry Moore of Bedford, the sportsmen lost an esteemed and popular warden and the Fish Commission one of its most capable and practical field men. He was particularly well known on waters in Bedford and Somerset Counties, to which territory he was assigned, and was a familiar figure to anglers fishing for the giant largemouth bass in Lake Gordon, Bedford County, a body of water he knew like a book.

The ANGLER takes this opportunity to pay tribute to a veteran of the streams whose passing leaves a void in the hearts of those who knew him well and to extend to his bereaved family sincere sympathy in their hour of grief.

CLUB FORMED

Westfield has a newly organized Rod and Gun Club with a membership of more than 50.

The officers are: President, Rev. W. F. Bumsted; vice-president, Eldon Ackley; secretary, Roy Nelson; treasurer, Allen Pride. Directors are Lawrence Root, Carl Pearson, Jack Graham, John Zurfluh, George Haxton, Robert Swetland and Arlie Skinner.

A committee has been appointed to locate a permanent club house and rifle range where there will be skeet, trap, rifle and pistol shooting.

Leslie Wood, Tioga County Game Protector, and W. E. Smith, Deputy Game Warden, both of Wellsboro, and Leland Cloos, of Middlebury, Tioga County Fish Warden, have been helpful in organizing the new club.

MONTGOMERY CLUBS DISTRIBUTE GAME

On Saturday, March 9th, at the Eastern State Penitentiary, Graterford, William Stoneback of Colmar, President of the Montgomery County Federation of Sportsmen's Clubs, and Irwin R. Clemens of Royersford, former President of this association, were on hand with sixty other members of the Federation to help Montgomery County Game Protector Ambrose Gerhart, of Souderton, in the distribution of 648 pheasants to representatives from the following fifteen member clubs of the Federation: Boulder Valley Sportsmen's Association, Sumneytown; Bucks-Montgomery Coon Hunter's Association, Skippack; Douglass Rod and Gun Association, Gilbertsville; Huntingdon Valley Fish and Game Association, Huntingdon Valley; Lansdale Sportsmen's Club, Lansdale; Lower Merion Rod and Gun Club, Narberth; Montgomery County Fish, Game and Forestry Association, Norristown; Perkiomen Valley Sportsmen's Association, Graterford; Pottstown's Sportsmen's Club, Pottstown; Royersford Hunt and Fish Association, Royersford; Souderton Game, Fish and Forestry Association, Souderton; Tri-County Fish and Game Association, Pottstown; Upper Perkiomen Fish, Game and Forestry Association, Red Hill; Upper Providence Fish, Game and Forestry Association, Oaks; and Wissahickon Field and Stream Association, Ambler.

(These pheasants were liberated by the above-named clubs on ground in Montgomery County which is open to public hunting).

Of the pheasants liberated, 113 had been trapped by Game Protector Gerhart from various game refuges; while 535 of the birds had been furnished, when tiny "chicks", by the Pennsylvania Game Commission and had been raised to maturity by inmates of the Eastern State Penitentiary under the guidance of Ira J. Mills, Director of Agricultural Education at the prison. In addition to increasing the supply of birds for our hunters, this work at the Penitentiary each year provides a means of occupation and education for prison inmates. The pens and houses in which these birds are raised on the Penitentiary grounds have been built through funds donated to the Federation by its member clubs. These funds are used to purchase building materials only. The labor is furnished without cost by the prison inmates.

(Two weeks before the sportsmen's clubs of Montgomery County also received ringneck pheasant cockbirds direct from the Pennsylvania Game Commission's farm at Schwenksville—also for liberation on open hunting ground in Montgomery County.)

The next quarterly meeting of the Montgomery County Federation of Sportsmen's Clubs will be held on the third Monday in April (April 15th), when the delegates from the fifteen member clubs will be guests of the Wissahickon Field and Stream Association in Ambler.

WHY DOES A FISHERMAN FISH?

By David Leroy Yount

Why does a fisherman fish, I ween,
And why does he dally astream?
He catches no fishes that ever I've seen
Except in a fisherman's dream!
And why does he idle the long, lonesome day
With fishin' worm, spinner, and fly?
I guess its because it's a fisherman's way—
Because he loves fishin'—that's why.

In a clear crystal pool does he dangle his lure
To inveigle with infinite care
The wild wary trout though he's really quite sure
That there isn't a single trout there.
If to peer in the depths of the clear, crystal pool
Were he given a magical eye:—
Sees it empty—keeps afishin'—the gamblin' fool—
Because he loves fishin'—that's why.

The fisherman fishin' loves fishin' I'd say,
Because in the depths of his soul
Swim the shades of the fishes of some ancient day
Where the ages still over them roll;
He knows not the reason, nor is he concerned,
He just sees with a magical eye;
In his soul is the flame which for ages has burned—
Because he loves fishin'—that's why!

TROUT FORAGE COMMON TO PENNSYLVANIA WATERS

(Continued from Page 5)

adult are illustrated in Figures 16 and 17, greatly enlarged.

Regarding the importance of these midges to fish life, Dr. J. G. Needham [3] says: "If it were not for the superabundance of these minute, seldom observed larvae, it is safe to say that fewer fresh water fishes would ever attain maturity. They are extremely important in the diet of young fishes. This is equally true in pond or stream, for midge larvae occur abundantly in both".

The adult fly bears a general resemblance to a mosquito but it does not bite and the male is equipped with a pair of proportionately immense, plumed antennae as shown in Fig. 17.

At times these flies emerge from lake and stream in vast swarms that not infrequently have been mistaken for clouds of smoke. At least one instance is on record where a fire department was called out to fight a supposed fire in a church steeple, but the "smoke" seen encircling it proved to be merely a huge swarm of *Chironomus* flies.

The larvae of this group are slender, delicate creatures that swim about at times by wriggling in the form of the figure 8. Many kinds are bright red and this has gained for them in Britain the name of "blood worm". However, the bloodworm of the fisherman along the American, Atlantic coast is a totally different creature, a true worm of marine origin, some 4 to 6 inches long belonging to genus *Rhyncobolus*.

The larvae of *Chironomus*, according to J. G. Needham, live mainly in tubes fastened from bits of sediment bound together with silk. These are fastened to the bottom or constructed in crevices, between leaves, or attached to stems and stones. Their food consists of diatoms and other minute plant life. These larvae are eaten not alone by baby trout, but Dr. Needham says that "of 25 trout taken at random from one of the best natural ponds of the New York State Game Commission, at Saranac Inn, had in their stomachs more than 100 bloodworms each".

The larvae of many crane flies or *Tipulidae* are found in trout streams and some of these of the genus *Tipula* (Fig. 18; enlarged about three times) are of large size. The largest of all *T. abdominalis*, is found crawling among the leaf debris upon which it feeds, in cold spring brooks, and is nearly two inches long.

Other fly inhabitants of such streams are the spindle-shaped larvae of the pestiferous deer flies *(Chrysops)* that buzz in swarms around the face and puncture the neck of the patient (if profane) fisherman in May and June.

In point of fact, the insect inhabitants of the trout stream are far too numerous for mention in an article so brief as this. For those anglers who desire to know the identity of many of these, nothing is more convenient or economical than the brief Guide to the Study of Fresh-Water Biology by J. G. Needham and P. R. Needham [4] sold by the Comstock Publishing Company of Ithaca, N. Y., at one dollar ($1.00). This is brief, illustrated, and easily carried in the pocket of a fishing coat. A more elaborate and expensive book is Ann Morgan's [8] Field Book of Ponds and Streams. For the information of those desiring to go further into the subject, a list of reference books is given at the end of this article.

In some types of trout streams, earthworms of aquatic and semi-aquatic species, which dwell in the soft, low banks of the stream, may form an important part of trout forage, especially during freshets. It is true that in the studies of trout food made by examination of their stomachs earthworms were found in rather small proportion. In considering this, however, it should be realized that earthworms are rapidly digested and quickly become unrecognizable, whereas the bodes of crustaceans and insects are somewhat protected by their horny, chitinous armor and digest much more slowly. In any event, every experienced trout fisherman knows the ability of old "squaretail" to recognize instantly the lucious quality of a fat nightcrawler.

Minnows such as the black-nosed dace which inhabit cold, clear streams are eaten quite largely by the trout. According to Paul Needham: "In brook trout waters in the eastern United States, various minnows, suckers, sculpins, etc., are usually abundant and furnish large amounts of food to the trout. The trout in such waters may maintain themselves fairly well in spite of fishing as long as such natural associations are undisturbed by the introduction of exotic forms. Many careless and unintentional plantings have been made by anglers in throwing unused bait minnows into waters when they were through fishing". Although indulged in by many unthinking fishermen, the use of minnows as bait is an almost inexcusable habit, especially in States where there is a continual struggle to keep trout waters stocked sufficiently to afford real sport.

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6. Ronalds, Alfred, The fly fishers Entomology, 1856.

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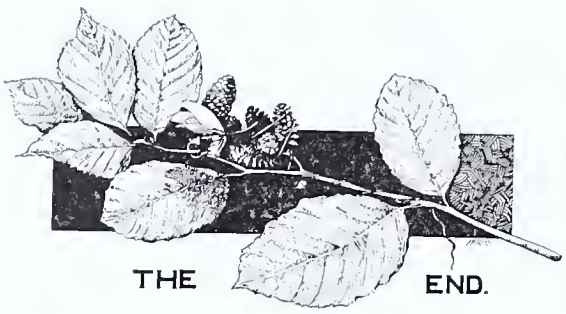
*Especially recommended to fishermen.



This catch of fallfish, 14 to 20 inches in length, was scored last season on plug in the Susquehanna River near Port Trevorton by Charles M Wetzel.

SUGGESTS REFUGES FOR STOCKED TROUT

One of the most ardent conservationists in Pennsylvania, a sportsman who draws his conclusions from actual observations while astream, is F. C. Hoch of Butler. For that reason we feel that ANGLER readers will find plenty of food for thought on his following suggestions relative to trout stocking. We quote:

"I have a particular stream in mind that is about twenty-five miles long. It has been a good trout stream for many years and is still good because of the cover and rough, hard going which affords a protection for the fish. There is about five miles of stream that seldom sees a fisherman from one season's end to the other. The five miles mentioned is located at about the middle of the stream and not at the upper end as would be generally supposed. If conditions stay the same it will be good ten years hence. I would say that the five miles mentioned is its greatest protection. If sanctuaries of a mile or two were established where *all the stocking was done* and no fishing allowed at any time, I believe that it would afford the stocked trout time to become acclimated and they would later work their way out and into the balance of the waters. The good results would not be immediate but would get better in the course of a few years. It seems to be a shame to put a lot of fish in a stream and have someone take them back out again a short time after planting. The sanctuary is good for game, therefore, why is it not good for trout?"

THIS TROUTING GAME

(Continued from Page 13)

they achieve larger size, it is argued, is one of the best types of insurance in providing a good stock of trout in the larger waters. Furthermore, exponents of this plan say, the catch of trout in small nursery streams is predominantly undersize fish, many of which are seriously injured or killed when taken from the hook.

Sportsmen's goodwill committees to work with the farmer. This, it is pointed out, has been tried in some sections of the state with notable success. The idea would be, as advanced, to have a committee of this type establish contacts with farmers on all fishing waters. Upon receiving established evidence of willful destruction of property from the farmer, and the license number of the fisherman responsible, the committee would then prosecute the case vigorously in a legal way insuring justice for the landowner. Another phase of its activities would be the placing of goodwill signs along streams in farming sections.

Building up the trout food supply. Exponents of forage planting argue that, in view of the drought and unfavorable natural conditions for forage production in many trout waters, steps should be taken to build back this supply of forage at as early a date as possible.

Reduce age limit for licenses from 16 to 14 years. It is argued that this would bring into the Fish Fund vital added revenue with which to expand the hatchery system and general program of the Fish Commission. Those in favor of the plan point out that the minimum age limit for purchasing hunting licenses is now 14 years, and claim that a similar age limit for fishing licenses is reasonable.

Close waters scheduled for legal size trout stocking to all fishing save during the regular open trout season. Exponents of this plan offer the following arguments. Many miles of warm water streams are available to the sucker fisherman who finds his sport in early spring. In sucker fishing, small hooks and worms are standard equipment and, even if a hooked trout is released as carefully as possible, the chances are heavy that it has swallowed the hook, and removal very often will mean its death. After being heavily stocked in trout streams early in the spring, trout are frequently ravenous upon becoming acclimated to their new environment, hence falling quickly to the lure of a worm-baited hook. Finally, it is contended, by closing regularly stocked trout streams save during the open season, no excuse would exist for fishing such waters and, on opening day, all fishermen would have an equal chance to test their skill in taking the stocked trout.

Season limit for trout. While admitting that the success of this plan would depend in major part on the cooperation given by the fishermen, exponents argue that there is every bit as much reason to put a season limit on game fish as there is for establishing season game kill limits. A strong trend is developing among fishermen, it is pointed out, to set their personal size, daily creel and season creel limits in taking trout and bass. It has also been noted in recent years that anglers are inclined to talk a great deal more about the number of legal trout returned to the water during the season than to brag about the number killed. Those favoring a season limit on trout put the figure at any place from 30 to 50 legal fish, with the majority favoring the 30 figure. They believe that such a plan would be given cooperation and definitely better the trout supply in our streams.

In reporting these suggestions from anglers relative to trout fishing, one fact stands out. Pennsylvania fishermen, as a group, are increasingly conservation-minded. Their discussions today apparently center not only about tackle and fishing methods but also branch out to include methods by which their sport may be bettered. In the final analysis, for more tight lines, the angler himself holds an important key.

ANGLERS CAN HELP THE WOODCOCK

Game Land Manager Earl E. Smith, Elk County, makes a very excellent suggestion or improving food conditions for woodcock which we are glad to pass along to fishermen.

Mr. Smith suggests that fishermen using angleworms, especially those who fish for bullheads in the ponds, swamps, and bayous, which are always close to good woodcock cover, can help the woodcock and the woodcock hunters by dumping the worms left over from their fishing along the shore, on grassy locations where most of the worms will survive and multiply, and in turn furnish food for the birds.

Frequently cans with hundreds of worms are left in the sun to die, and later to become a nuisance to other anglers who fish in the vicinity. The worms could just as well be planted without much effort for the benefit of the woodcock which eat these worms in preference to almost any other food.

URGE MINE SEALING

Approximately 80 Union County sportsmen were in attendance at a meeting held in the Court House, Lewisburg, at which time a resolution was approved calling on Union County Commissioners to reconsider their action in refusing to meet a quota for the sealing of abandoned mines along the West Branch of the Susquehanna River. A movement has been started to seal the mines as part of a WPA project, with the various counties along the West Branch sharing in the Sponsorer's expenses.

Advantages of this work and other discussions on association activities were presented by Assemblyman Charles R. Reagan, Fish Warden Arthur Snyder, Game Warden Fred Fisher, Forester Raymond Winter, Rev. V. D. Naugle, Colonel Samuel B. Wolfe, A. J. Sholter, and John Heim.

It was decided to organize as "The Union County Sportsmen's Association" and membership will be taken in the Pennsylvania Sportsmen's Federation.

Officers were elected as follows, president, Attorney Clair Groover; vice presidents, R. S. Diehl and Elmer Herring; secretary, Dr. Amos B. Smith; treasurer, Weber L. Gearhart; directors: Attorneys W. N. C. Marsh, Assemblyman C. R. Reagan, Federal Judge Albert W. Johnson, Judge C. C. Lesher, Attorney Harry M. Showalter, Colonel S. B. Wolfe, Judge D. R. Pursley, Daniel Green, Joseph Seebold, William Busser, and Rev. V. D. Naugle; executive committee, Joseph Snyder, Benjamin Specht, and A. J. Herbster.

Organization matters were considered and it was decided to form committees for field trials, fish, small game, big game, conservation, trap shooting, target shooting, membership, and program.

A man has finally reached the age of discretion when he thinks he has the world by the tail, but is no longer sure he can swing it.

One of Pennsylvania's most ardent anglers is G. Albert Stewart, secretary of Forests and Waters. This photo was taken as he tried his luck for trout at the Spring Creek project last year.

TROUT STREAMS STOCKED WITH LEGAL TROUT

(Continued from Page 23)

Northampton County

Brook trout, Bertsch Creek, Coffeetown Run, Greenawalts Creek, Indian Creek, Jacabus Creek and Waltz Creek; brook and brown trout, Monocacy Creek; brook, brown and rainbow trout, Sucon Creek, brown and rainbow trout, Bushkill Creek and Catasauqua Creek; brown trout, Lt. Bushkill Creek, Hokendauqua Creek, Martins Creek and Lt. Martins Creek.

Perry County

Brook trout, Browns Run, Green Valley Run, Laurel Run, Liberty Valley Run, Montour Run, McCabe Run, Shaffer Run and Shermans Creek; brown trout, Horse Valley Creek, and Lt. Juniata Creek.

Pike County

Brook trout, Lt. Bushkill Creek, Middle Bushkill Creek, Dingmans Creek, Dwarfkill Creek, Indian Ladder Creek, Kellam Creek, Middle Branch Creek, Millrift Creek, Panther Brook, Raymondskill Creek, Sanvantine Creek and Twin Lake Creek; brook and brown trout, Big Bushkill Creek; brown trout, Big Bushkill Creek; brown trout, Shohola Creek, Wallenpapack Creek and E. Br. Wallenpaupack Creek.

Potter County

Brook trout, Bailey Run, Cushing Creek, Dingman Run, Left Hand Br. Dingman Run, Dodge Brook, Dry Run, Eleven Mile Run, Fishing Creek, E. Br. Fishing Creek, W. Br. Fishing Creek, Genesee River, Lt. Kettle Creek, Lyman Run, Big Moore Run, Nelson Run, Nine Mile Run, S. Br. Oswayo Creek, Oswayo Creek, Genesee Fk. of Pine Creek, E. Fk. Portage Creek, W. Fk. of Portage Creek, Sartwell Creek, Reynoldstown Creek, E. Fk. of the First Fk. of Sinnemahoning Creek, Trout Run, and S. Fk. of the First Fk. of Sinnemahoning Creek; brown trout, Cowanesque River, Cross Forks Creek, Kettle Creek, Mill Creek, Pine Creek, W. Br. Pine Creek and First Fk. Sinnemahoning Creek; brown and rainbow trout, N. Br. Genesee River and W. Br. Genesee River.

Schuylkill County

Brook trout, Bear Creek, Beaver Creek, Black Creek, Neifert Creek, Pine Creek and Pine Creek; brown trout, Evening Branch, Fishing Creek, W. Br. Fishing Creek and Locust Creek; brown and rainbow trout, Lt. Catawissa Creek, Deep Creek and Lt. Swatara Creek.

Snyder County

Brook trout, Aigler Run, Brickhart Run, Krepp Gap Run, Kuhn-Hooven Run and Swift Run; brown trout, N. Br. Middle Creek; brook and rainbow trout, N. Br. Mahantango Creek.

Somerset County

Brook trout, Beaverdam Run, S. Fk. Bens Creek, Blue Hole Run, Brush Creek, Clear Run, Shafer Run, Iser Run, Jones Mill Run, McClintock Run, Sandy Run and Tub Mill Run; brook and rainbow trout, Drakes Run; brown trout, Beaverdam Run, Piney Creek, Beaverdam Run, Deeter Run, Flaugherty Creek, Raystown Br. Juniata River, Big Piney Creek, Stoney Creek and Wills Creek; rainbow trout, Kooser's Lake; brown and rainbow trout, Clear Shade Creek, Laurel Hill Creek, and Whites Creek.

Sullivan County

Brook trout, Black Creek, Double Run, Elklick Run, Glass Creek, Lewis Creek, Lick Creek, N. Br. Mehoopany Creek, Mill Creek, Pigeon Creek, Pole Bridge Run, and Rock Run; brown trout, Elk Creek, E. Br. Fishing Creek, W .Br Fishing Creek, Hogland Branch, Kettle Creek, Lopez Creek, Loyalsock Creek, Lt Loyalsock Creek, Muncy Creek, Ogdonia Creek and Sullivan Branch

Susquehanna County

Brook trout, Mitchell Creek, Nine Partners Creek and Riley Creek; brook, brown and rainbow trout, Starrucca Creek; brown trout, Butler Creek, Gaylord Creek, Gibson Creek, Harding Creek, Harmony Creek, W. Br. Lackawanna Creek, E. Br. Lackawanna Creek, and E. Br. Tunkhannock Creek; brown and rainbow trout, Tunkhannock Creek.

Tioga County

Brook trout, Elk Run, Fall Brook, Long Run, Mill Creek, W. Br. Mill Creek, Phoenix Run, Sand Run, Straight Run, Left Br. Straight Run and Right Br. Straight Run; brook and brown trout, Tioga River, and Asaph Run; brown and rainbow trout, Pine Creek; brown trout, Blacks Creek, Blockhouse Run and Stoney Fork Creek.

Union County

Brook trout, Bear Run, Beaver Run, Halfway Run, Sand Spring Run, and Spruce Run; brown trout, Buffalo Creek, Lt. Buffalo Creek, N. Br. Buffalo Creek, Laurel Run, Rapid Run, Spring Creek, Weiker Run, and White Deer Creek; rainbow trout, Halfway Dam; brown and rainbow trout, Penns Creek.

High water prevailed in Stoney Creek, Dauphin County, on opening day of the trout season last year.

Venango County

Brook trout, Cherry Run, Hemlock Creek, Horse Creek, Mill Creek, Porkey Creek, Prather Run, Tarr Kill Creek, and Stewart Run; brown trout, Sugar Creek, E. Br. Sugar Creek, East Sandy Creek, S. Br. Sandy Creek and Lt. Sandy Creek; brown and rainbow trout, Upper Two Mile Run, Pithole Creek, West Pithole Creek, Scrubgrass Creek, Lt. Scrubgrass Creek, N. Fk. of Lt. Scrubgrass Creek and S. Fk. of Lt. Scrubgrass Creek.

Warren County

Brook trout, Ben Jeorge Creek, Blue Eye Creek, Coffee Creek, Hemlock Run, Lamb Run, Perry McGee Run, McGuire Run, Phelps Creek, Rock Hollow Run, N. W. Br. Spring Creek, Tidioute Creek, and Wilson Run; brown trout, West Hickory Creek, W. Br. Caldwell Creek and Caldwell Creek; brown and rainbow trout, Lt. Brokenstraw Creek, Brokenstraw Creek and E. Br. Spring Creek; brook, brown and rainbow trout, Pine Creek.

Wayne County

Brook trout, Babitville Creek, Beaverdam Creek, Calkins Creek, N. Br. Calkins Creek, S. Br. Calkins Creek, Big Br. Dyberry Creek, S. Br. Equinunk Creek, Shad Pond Creek and E. Br. Starrucca Creek; brown trout, Butternut Creek, Lackawaxen River, Middle Creek, Shehawken Creek and Wallenpaupack Creek; brook and rainbow trout, W. Br. Dyberry Creek; brook and brown trout, Lt. Equinunk Creek, and Lehigh River; brook, brown and rainbow trout, Johnson Creek, W. Br. Lackawaxen River and W. Br. Wallenpaupack Creek; brook, brown and rainbow trout, Johnson Creek.

Westmoreland County

Brook trout, Baldwin Run, Camp Run, Furnace Run, Mill Creek, Middle Fk. Mill Creek, North Fk. Mill Creek, S. Fk. Mill Creek, Pike Run, Powder Mill Run, Roaring Run and Shannon Run; brown trout, Indian Creek, Jacobs Creek, Loyalhanna Creek, Tub Mill Run and Linn Run.

Wyoming County

Brook trout, Leonards Creek and Beaver Run; brook and rainbow trout, N. Br. Mehoopany Creek; brown and rainbow trout, Bowmans Creek; brook, brown and rainbow trout, Mehoopany Creek.

York County

Brook trout, Beaver Run, Fishing Creek, Kaltreiders Creek, Leibs Creek, Orson Run, Rambo Run, Rehmayer Hollow Run and Toms Run; brown trout, Furnace Run; brown and rainbow trout, Otter Creek; rainbow trout, Haldeman Pond.

LICENSE NECESSARY ON PRIVATE WATERS

John C. Youngman, of Williamsport, assisted by W. M. Rosenfield, Towanda, represented the Fish Commission in a test case in Bradford County in which the commission's contention that fishing licenses are necessary even when fishing in private waters inside the commonwealth was upheld.

Three defendants alleged they did not need licenses because the lake on which they were fishing is privately owned and they had paid a fee to the owner.

NOTES FROM A FISHERMAN'S DIARY

Continued from Page 7)

water in fairly good numbers, but failed to interest the trout.

June 11

Ben Baird and I fished Fishing Creek above Mill Hall, Clinton County, this evening. No luck. Then went to Lick Run, where we caught three brown trout on bucktails. A few caddis flies over the water.

June 28

David Baird and I camped last night along the Hammersleys and almost froze. Fished the forks today, but the stream was high and discolored. The Golden Spinner, and the stone fly, commonly known as the Yellow Sally, were both over the water but the trout would not rise. Then tried the quill nymph, on which I took three small brook trout. Returned these fish to the water.

July 2

Ran into an enormous hatch of Yellow Drakes this evening on Middle Creek. The flies appeared just at dark, and in a short time, I took three nice trout on the dry fly. These insects appeared exactly on the same day the year before, only not in such great numbers.

July 4

Camped last night along Kettle Creek and fished the "Cannonading Hole" and the Forks today. Took two rainbow trout on the quill nymph, and in the evening took two more on the Yellow Sally. The White Gloved Howdy, the Scorpion fly, the White Miller, and many green and yellow stoneflies were over the water just before dark.

* * * * *

In looking back over these notes, the flies herein mentioned are especially worthy of imitation. From numerous autopsies I have made, all of them were found in the stomachs of fish—indisputable evidence that trout feed on them. I have given the dressings of quite a few in the January and former issues of the ANGLER; and a few more, that are especially noteworthy, are described herewith. The following are all mayflies.

Description, Ginger Quill (Dun): Length of wings, one half inch; wings, brownish, with conspicuous dark brown veins; tails, 2, ginger; legs, ginger, with dark brown bands on the femurs; abdomen, brown and yellow, conspicuously ringed.

Imitation, Ginger Quill (Dun): Hook, #12, hackle, ginger; wings, speckled Mandarin duck, tied either fan wing, or rolled wing style; body, peacock quill; tail, ginger hackle fibres.

Description, Ginger Quill (Spinner): Wings clear and glassy; tails, light brown, about one inch long, with dark brown joinings. Balance of description, same as the dun.

Imitation, Ginger Quill (Spinner): Hook, #12; hackle ginger; wings, pale starling; body, peacock quill; tail, mandarin fibres.

Description, Black Quill: Length of wings, three-eighths to one-half an inch; wings, a dark bluish black; legs, greyish black; abdomen, black with dark brown bands; tails, three greyish black.

Imitation, Black Quill: Hook, #14 or #16; hackle, light black; wings, coot; body, dark peacock quill; tail, light black hackle fibres. *NOTE:* This Black Quill is in many localities known as the Blue Dun.

Description, Pale Evening Dun: Length of wings, one-fourth to three-eighths of an inch long; wings, dark grey; legs, pale yellowish; tails, three, yellowish white, about three-eighths of an inch long; body, yellowish white.

Imitation, Pale Evening Dun: Hook, #16, wings, dark starling; hackle, pale yellow, or light ginger; body, pale yellow floss silk; tail, light mandarin fibres.

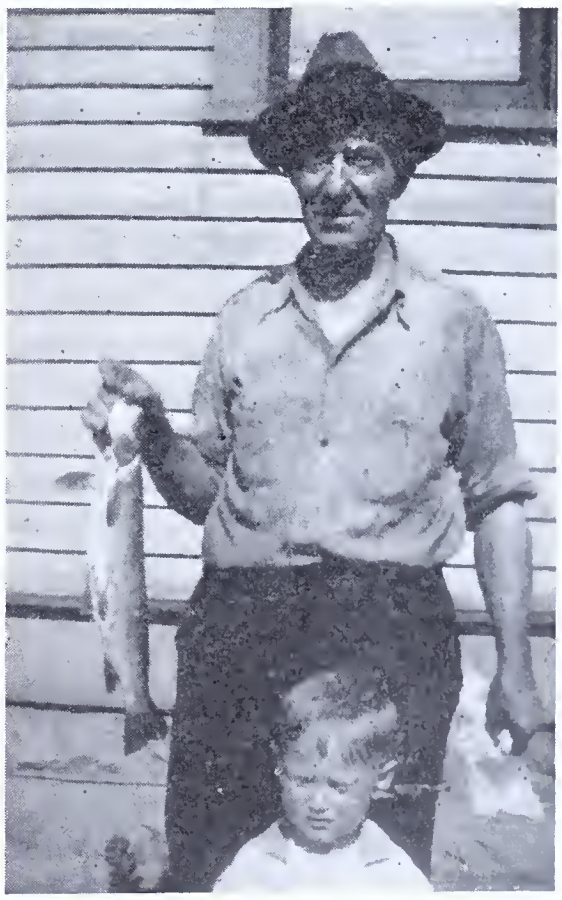
Description, Pale Evening Spinner: Wings clear and glassy; tails, white. Balance of description, same as for the dun.

Imitation, Pale Evening Spinner: Hook, #16; hackle, pale yellowish; wings, light starling; body, pale yellow floss silk; tail, white hackle fibres.

NOTE: In addition to the above, the egg sac of the female should be represented by a ball of yellow chenille placed near the bend of the hook.

Included with above imitations, one should possess a few quill nymphs. When fished close to the bottom, these flies will often produce results when the trout are not feeding on the surface. To get them down to this depth, my practice is to fasten a split shot sinker, size BB, to the leader, about a foot above the nymph.

Quill is an ideal material, especially for those nymphs found under stones like the Red Quill, Ginger Quill and the majority of the stoneflies. In many cases the ribbed quill from the eye of a peacock feather is too short, and I have dispensed with it almost altogether, in favor of black, yellow and brown moosemane. To get the correct shade, the latter two colors should be dyed. Suppose we tie a stonefly nymph, which will illustrate the method of procedure. So far as I know, the method of tying, and the material used for the legs and wing cases, is essentially my own.



J. L. Brissler of Johsonburg with a 19 inch brown trout he landed in Water Mile Run, McKean County, in June. When opened, a ground squirrel was found in the stomach of this fish.

The Stone Fly Nymph

Start the nymph by fastening in the moosemane tail and feelers, Figure "A". Then with padding cotton, or silk, form the body to the shape indicated in Figure "B".

Near the bend of the hook, fasten in the dark brown and yellow moosemane, see Figure "C" then bring the tying silk forward and let it hang near the eye of the hook with hackle pliers attached.

Now wind on the light moosemane first, and fasten at eye; then return, and spirally rib with the darker brown. Cut off the excess ends. Figure "D" represents the fly at this stage. If you desire a lighter color for the belly of the nymph, a few additional strands of light moosemane are fastened in near the bend, at the same time the body material is fastened. After the body is formed, these fibres are brought forward on the underside, and fastened near the eye of the hook.

From two Jungle Cock feathers, detach the nails which are used for forming the wing pads. See Figure "E".

Fasten these wings or nails in on the top—one slightly in front of the other—by a few turns of the tying silk. When pressure is exerted, these nails will split in the center, forming the wing pads, but if they fail to open readily, split them apart with a knife. Figure "F" illustrates the nymph with the wing pads tied in position.

In forming the legs of the nymph, moosemane is used. Cut off a short tuft, hold it in position underneath, then take a couple of loose turns around it with the tying silk, see Figure "G".

Now with the thumb and first finger guiding the tuft, so that it will not creep around towards the top of the hook, pull vertically downward on the tying silk. The pressure of the silk cutting into the moosemane, will cause it to spread apart; after which, a few more turns are made to further secure the legs in position. Now fasten off with the whip finish, and tear off the excess end of the tying silk. With the scissors trim out the excess legs, then finally coat the winding with liquid lacquer cement. Figures "H" and "J" represent an elevation and a plan view of the fishing nymph. The natural nymph is shown in Figure "K".

The Mayfly Nymph

In tying this nymph, the method of procedure is quite similar to the above.

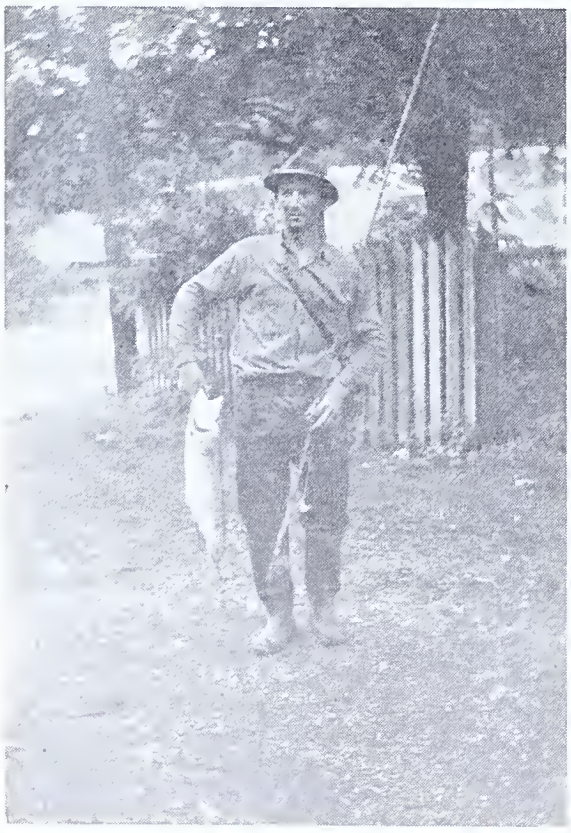
After the body is formed with the padding cotton, it is then swabbed with lacquer cement. Now take a pair of pliers, and flatten it to the required shape, after which it is left to dry. From here on follow the same methods as outlined for the stonefly, with the exception that only one pair of wing cases is used. The finished mayfly nymph is shown in Figure "L". The natural mayfly nymph is shown in Figure "M".

"Know yourself" says the philosopher. Yes, but who is going to introduce us?

HERE AND THERE IN ANGLERDOM

Harry Baumgardner, special warden of Lewistown, writes: "My brother, Carl, caught a 16½ inch smallmouth bass on dry fly in Tuscarora Creek late in August. I also had a few good days on Tuscarora last season. On one occasion caught nine pickerel, the smallest being of legal 12 inch size. Had one that measured 17½ inches, another 18 inches and the rest ranging around 14 to 15 inches. Only kept the two largest fish, letting the others go". That's the spirit, Harry.

Edward Mahon, 593 Carey Ave., Wilkes-Barre, caught a smallmouth bass, weight 2 pounds 2 ounces when cleaned, length 18 inches, in Harveys Lake, using a grasshopper, on July 6, 1939. Harry Edwards of Huntsville, caught a smallmouth bass, weight 4 pounds, length 19½ inches, in Harveys Lake, using a pork rind lure, on July 26, 1939. Leroy West, 42 Gillegan St., Wilkes-Barre, caught a smallmouth bass, weight 3½ pounds, length 19¾ inches, in the North Branch of the Susquehanna River, using a spinner, on September 10, 1939. Joe Sarnecki, 288 Moffat St., Plains, caught a smallmouth bass, weight 2 pounds and 14 ounces when dressed, in the North Branch of the Susquehanna River, using a live minnow, on September 4, 1939.



Piney Creek in Blair County yielded this giant brown trout to Mike Conrad of Ganister last season. Measuring 26 inches and weighing 7½ ounds, it fell to the lure of a minnow.

H. S. Ahlborn, RFD No. 4, Dallas, caught a pickerel, weight 3¾ pounds, length 26½ inches, in Harveys Lake, using a spinner and pork rind, on August 19, 1939. Frank Yesson, 18 Eno St., Kingston, caught a pickerel, weight 3¼ pounds, length 24 inches, in Harveys Lake, using a live minnow, last season.

Members of the Galeton Sportsmen's Club have been carrying through a well-rounded conservation program affecting both fish and game, according to a report received from Warden Kenneth Aley of Galeton. Included in the group are Arthur Anderson, Albert Nordquist, G. Pisquadio, John Meyers, Joe Finch, Walter Long and John Olson.

"The following incident may prove as interesting to you as it was to me," writes Dr. Don S. Leet of Pittsburgh. "While sojourning this summer at the shore of Findley Lake, N. Y., my wife's attention was attracted to a commotion in the road that ran just in front of the cottage. She ran closer to ascertain the cause and was astonished to find a frog and a chipmunk locked in deadly embrace, kicking and clawing each other in a most belligerent manner. An approaching car alarmed the chipmunk who left the combat and leaped into the grass while the frog, apparently dazed, remained as the car sped by, when he too took to the tall grass. My wife remained to see if hostilities might again be resumed but the contest was over. Perhaps just a little diversion for both in keeping with the spirit of the times."

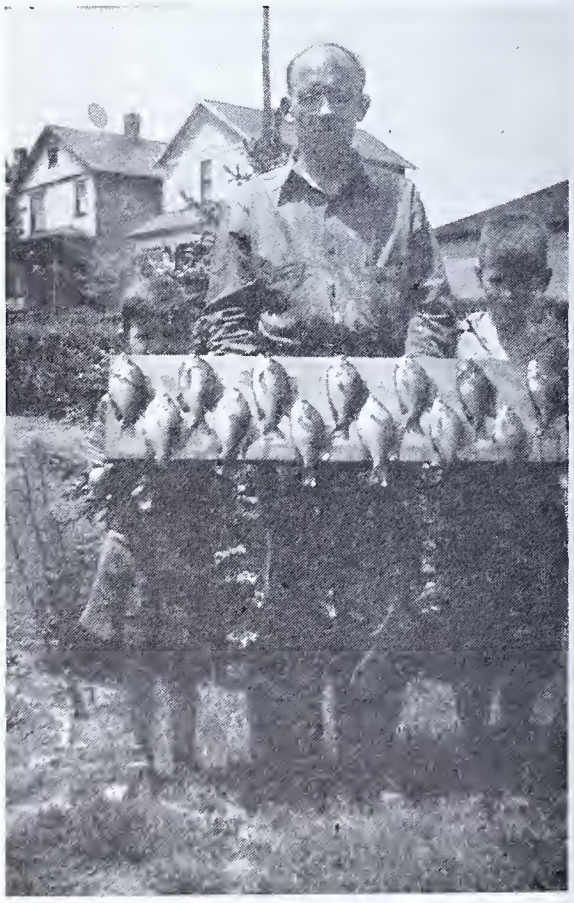
John Crowe, editor of the livewire column "Afield and Astream in Erie County" in the Erie Dispatch-Herald, ranks muskie fishing as a tough game and adds the pertinent thought that very few anglers are willing to spend the time or display the patience necessary to catching this tiger of the freshwater. He lists among the famous muskie fishermen of Erie County "Chet" Comer, "Doc" Shipley and Fish Warden Bill Briggs.

Quite a few largemouth bass have been taken from the Susquehanna River in the vicinity of Harrisburg in recent years. A jointed plug accounted for a fine fish of this species for Frank Ulrich of Middletown. It was 22 inches in length and weighed 4 pounds 9 ounces. Old timers on the river frequently refer to largemouth bass as "grass bass", an appropriate term, at that, since they seem generally to be caught in the immediate vicinity of grass patches.

Ranking with topflight smallmouth bass taken in central counties during the 1939 bass season was the splendid fish caught by Elmer White of Harrisburg in the Juniata River. Elmer's catch measured 21½ inches in length and tipped the scales at 4 pounds 12 ounces, a lot of smallmouth in any fisherman's language. The catch was scored on a crayfish.

C. E. Young of Pittsburgh is an ardent advocate of watersnake control for better fishing. He makes a timely suggestion that organized sportsmen cooperate throughout the state during the coming year with the Fish Commission in staging drives against this predator. "I have killed plenty of watersnakes," he writes, "and in many cases have found from one to three trout in them".

Taking a 19-inch brown trout on a No. 20 midge fly is an accomplishment of which any angler may be proud. Sam Daddow, veteran St. Clair fisherman, had that distinction during the past trout season, according to Jack Richards. when he landed the fish after a 20 minute battle while fishing at High Bridge in Schuylkill County.



As nice as they come, these bluegill sunfish caught by Thomas Gathers and John Ray in Crystal Lake at Hartstown last June. They ranged in length from 7½ to 8 inches.

ANTICIPATION

By
ROBERT F. KEAGLE

•

Anticipation is all very well as a prelude to a fact
Though rather dull and empty as a substitute I vow;
For many months I temporized with wishful thoughts and dreams
But am ready for some real trout-fishing now.
My rods have been revarnished and ferrules tightened up,
Reels are oiled and lines are dressed like new,
My pocketbook depleted replacing wornout flies
Which somehow, every season seem to number quite a few;
But now my heart grows lighter because I know that soon
Anticipation will have had its day
And I will be along some stream in April's sun or rain
Thankfully trout-fishing in my accustomed way.

It will not matter greatly if streams are high or low
Nor will the weather be of grave import!
No vagrancy of Nature is ever so severe
That it robs me of my opening season sport;
Besides, the inner hunger to view familiar scenes
And to revel in the new spring's glad return
Is ever more important than the limit of my creel
And always more compelling than discomforts I may earn.
Let those who will remain at home, comfortable and warm,
Foregoing all the happiness I'm sure to realize
For I'll not be contented until a day is spent
Along some well beloved stream under April skies.

On Opening Day . . .

MAY CONSCIENCE DICTATE

A SPORTSMAN'S CREEL

PENNSYLVANIA ANGLER

MAY, 1940

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EDITORIAL

Acquisition of Public Water Supplies as Fish Propagating Areas

FOR many years the Board of Fish Commissioners has endeavored to secure for the fishermen of Pennsylvania, the right to fish in public water supplies. Where this could not be accomplished, an effort was made to acquire the water area for propagation purposes. Unfortunately, no progress was made until April of this year, and I am happy to announce that the first agreement of this kind has been entered into with the Philadelphia Suburban Water Company, Bryn Mawr, turning over what is known as their Springton Reservoir on Crum Creek, Delaware County.

The water area is approximately 400 acres and will be used as a co-operative nursery, which will in no way interfere with the operation of the Reservoir as a water supply. Under the plan which has been formulaetd, it will be possible to greatly increase the distribution of bass, sunfish, catfish and suckers.

After a careful biological study which is already in progress, it will be possible for the Board to annually remove the surplus small fish, take them to the different State Hatcheries where they will be grown to a size suitable for stocking in the public waters. The surplus mature fish will be planted direct from the Reservoir into suitable fishing areas where the public is allowed to fish.

While the Reservoir will be posted as a nursery and all fishing prohibited on the main body of water, the agreements which have been previously set up will still be in force; that is, the public may enjoy fishing in that part of the Reservoir from the bridges and highway embankments carrying the Gradyville Road and the Bishop Hollow Road across the Reservoir.

The Board hopes that other water companies in Pennsylvania will follow their example inasmuch as the fish crops in most of these reservoirs could be harvested through an agreement with the State Fish Commission. It would be a direct benefit to the anglers and would greatly increase the distribution and still more important, would be conserving a natural resourse which is now going to waste.

C. A. French
Commissioner of Fisheries

A MAD-TOM HAIR MINNOW AND FLY TYING GOSSIP

By WM. R. WALTON

THE literature of fly tying or "fly dressing", as the English put it, is almost as voluminous as that of angling with which it is of course closely allied. Even the earliest of publications in English treating on the gentle art, Viz: "The Treatyse of Fysshynge Wyth an Angle", from the Book of St. Albans, 1496, and said to have been written by Juliana Berners or Barnes, an English nun, contains brief directions for tying flies suitable for each month from March to August inclusive.

Much of the very excellent British literature on the subject has to do with the tying either of salmon flies or dry flies for trout and grayling. Of these the series by Halford, and Ronald's "Fly Fisher's Entomology" are justly famous.

Really unique among American works on fly tying is the little book by J. Harrington Keene (O. Judd Co., New York, 1887) "Fly-Fishing and Fly-Making". The author of this, evidently realizing that the greatest fault of most works on the subject is a dearth of illustrations, has endeavored to supply this need in part, by including some 36 samples of actual fly-making material pasted on 2 full page plates. These include almost everything required from tinsel and various body materials to wing feathers and the standard kinds of hackles. To be sure, the tinsel is now so tarnished as to be almost unrecognizable but most of the other material, in my copy, is as bright and clean as new.

Although for many years nothing really new in the way of fly material appeared on the horizon, in recent times, American industry has changed this condition of stagnation and there is every reason to believe that many improvements and innovations may be expected in the near future.

Among the most recent things of promise are the developments in plastics already in use in the form of cements and plastic wood and the immediate prospect of the general utilization of artificial silks in many forms for fly dressing purposes. Those who have tested the new leaders of this type will realize the improvements that are in sight.

However, it is not my purpose in this article to discuss these new things but rather to offer to newcomers in the construction of fly rod lures some information that has resulted from my own experience and which it is hoped may be helpful.

Vises

Much might be said in the matter of vises for fly tying although in the case of large flies such as those intended for bass and salmon, it is possible to eliminate entirely the aid of a vise.

For instance, some writers on salmon fly dressing such as T. E. Price-Tannat, (1) insist that a vise is quite unnecessary for that purpose, and the author proceeds to explain quite clearly and with many excellent illustrations just how this may be accomplished.

However, for those of us not trained in the art of prestidigitation and whose fingers respond but imperfectly to our commands, a vise becomes a most grateful aid if not a dire necessity.

Although any small vise that will grasp a hook firmly may be used in fly tying, my personal preference is for the kind such as I am using and which is actuated by a lever and cam, a single downward movement of which fixes the hook immovably.

A most useful and convenient accessory to this is a bobbin or shuttle having a slender tubular nose through which the waxed thread is fed under adjustable tension. I consider this device the most helpful mechanical aid to fly tying that has appeared in my time. This has, however, one fault of which the beginner in its use should beware, viz: The wax, scraped from the thread, gradually accumulates at the inside, invisible entrance to the feeding tube thus creating increasing friction which may snap the tying silk at a critical moment. One must therefore watch this and remove the gob of wax before accident and rash words result. Nevertheless this is a nifty tool and well worth its price. The expert commercial tyer would no doubt elevate his or her snozzle at this implement but for the amateur it is as the elephant's trunk.

Tools

Although the expert tyer needs but few tools, the beginner will find the aid of some additional simple tools, of great help. Among these a good pair of hackle pliers is preferred by most people although I have learned to distrust their security and eliminate them in favor of my finger tips. One of the handiest of auxiliaries, and one seldom mentioned in works on fly tying, is a pair of straight-pointed spring forceps or tweezers about 5 inches long as illustrated in figure 1. These may be purchased from biological supply houses and dealers in dental and surgical supplies and if only one is purchased the shape illustrated will be found most convenient. As sold, such forceps are likely to be held open by a spring that is rather too stiff. This renders them insufficiently sensitive to the touch in handling such delicate materials as small feathers, tying silk, fine tinsel and similar things. To remedy this I recommend that the spring on one leg of the forceps be ground down thin enough until, by trial, it fits the touch of the individual hand. (See Fig. 1.) Care should be taken of course not to thin the spring to the breaking point.

Such forceps are enormously useful in picking up small feathers either singly or collectively, and a little practice soon enables their operator to scoop up a handful of slippery, evasive hackles in an instant. They also afford grateful relief both to eyes and nerves, in persuading the visibly unwilling tip of the tying silk to enter minute openings even in the closest of quarters.

Another simple and inexpensive tool is something like the bodkin used by fly tyers for pricking out the tangled hackles but used for entirely different purposes, as will be described.

This is a length of steel wire of about 18 guage or smaller ground to a point and set in a handle of wood (Fig. 2) or other material. My habit is to purchase some steel crochet hooks, at the ever available "5 and 10", and modify them by grinding down the tips to suit my purpose. Such hooks usually are double ended in which case the opposite ends may be shaped differently as desired. One end may be left straight and ground to a point for use as a bodkin and the other bent at angle as illustrated in figure 2.

Many uses for this tool will suggest themselves but one of the most surprising and gratifying is its utility as a substitute for a small brush in applying lacquer or enamel paint to heads of flies and hair minnows. For this purpose one bent at a rather sharp angle will be found to work best. This is much superior to a brush in applying enamel paints to small surfaces. By its use one can pick up a drop of such liquid and apply it with the greatest accuracy upon the smallest surface. Furthermore, when the work is finished, the wire is simply wiped clean with a bit of cloth or even paper and is then instantly ready for use with another color or substance.

When using brushes, a separate one is required for each color and then too, brushes must be carefully washed in a suitable solvent after use; otherwise they will be found in a few hours to have become pretty good as tooth picks but middling poor as brushes.

Hackles

Perhaps no single item is more important in the tying of the conventional type of fly either dry or wet, than a suitable hackle. By the same token, none is more difficult to purchase successfully from a dealers' catalog or description.

Personal experience carries conviction that the safect method of purchase even though it may be initially expensive, is to buy entire necks of the best quality of cock's hackles. Even then, however, it must be said that there exists a wide variation in standards of quality as between dealers. My advice is to shun such dealers as are also manufacturers of flies as they seem to think that second grade hackles are good enough for amateur use.

By purchasing an entire neck of the best quality one gets a large range of sizes which may then be assorted to size by means of partitioned trays hereafter described.

Certain kinds of hackles such as badger and cochybondhu of first quality are difficult to obtain at any price commercially. One of my favorite stunts to overcome this is to visit a fowl market occasionally and examine the birds exhibited in crates. When

n old cock, (which always has long, stout purs) of desired color is spied, I purchase im, strip off the coveted hackles and soon op him in the pot for fricassee. One may also purchase guinea fowl on the same plan and save money. In following this plan one should always be sure that the bird is an old once because as a rule, only elderly roosters, 3 years or more, possess the glossy, hard ough hackles that are most desirable.

The neck hackles of game cocks such as illustrated in figure 3, are most desired for dry fly use and they are good for almost any small fly purpose as well as for streamers. It is, however, almost impossible to find such hackles that are the same tint of color on both sides, as the undersides usually are much lighter than the upper ones. Uniformly colored hackles of this kind are both rare and valuable so in case you find any, do not waste them.

A word of warning to the uninitiated is to keep feathers in a tightly closed box with plenty of napthalene flakes or balls at all times. This chemical is both cheap and efficient as an insecticide or repellant, while feathers of all kinds are the favorite food of certain kinds of beetles that can convert valuable feathers to dust in jig time.

Although dyed hackles are indispensable for bass and similar flies, they are frequently of inferior quality unless purchased in the whole neck. It should be remembered that most of the dyed hackles originally were white, and first class hackles of that kind are none too plentiful.

There is no such thing as a natural hackle of true black color, and for this reason the dyed ones are much the better.

Assorting Trays

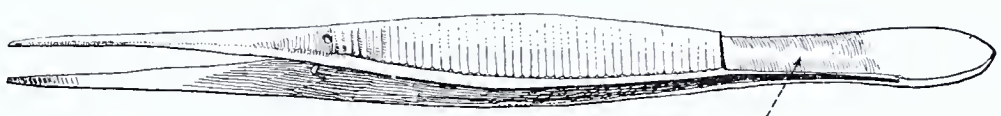
One of the most time consuming and tedious of all preparatory operations that the amateur fly tyer has to perform is assorting hackles and other feathers to size and color, or matching them in pairs from opposite sides of the bird. It frequently takes more time and effort to select appropriate feathers than is consumed afterward in tying and finishing the flies. Some of this seems unavoidable but there is one material and simple aid in assorting hackles that can easily be provided and which is well worth the slight effort required for its construction. This is the partitioned hackle tray as illustrated in figure 4. For this a cigar box may be used but any substantial cardboard or light wooden box about 4½ x 8 inches in size and 1½ inches deep will serve nicely. The partitions should be spaced about one inch apart and of gradually varying length as shown in the figure. In this, hackles of a single color but varying in size occupy one side of the diagonal partition. If as previously recommended, hackles are purchased as entire necks, these may be removed and assorted to size easily to fit the various partitioned spaces. It is difficult to judge the actual length of the hackles while they are in place on the neck because of over-lapping but this impediment is removed by the use of the tray. Its use also prevents the blowing away of the feathers by chance currents of air and of course the use of the forceps as previously described renders the extraction of the hackles from their cells perfectly easy.

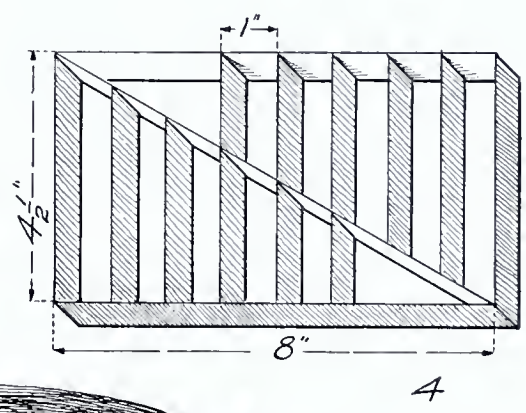
Chenille

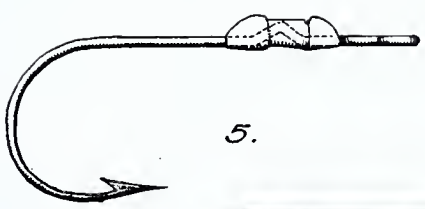
For black bass of both kinds under summer conditions, when the water is low and clear, I have a strong affection for certain chenille-bodied flies such as the western bee and especially for the McGinty. On some days in July, both the bass and channel catfish seem to go fairly bughouse over, or rather under, this fly. Go ahead and stick up your nose at the catfish if you like, but if you never have struck a 3 pound channel cat on a fly you'd be surprised and mayhap dismayed, at what it can do to your favorite light fly rod!

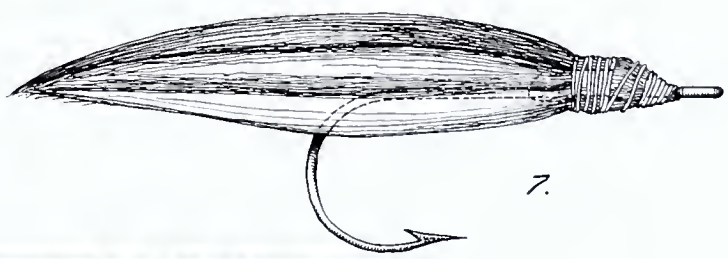
Well, anyhow, when I get to talking about chenilles my back hair begins to raise "like the quills of the fretful porcupine". In recent years, the chenille purchased from several more than several dealers of repute had peeved me more than somewhat. It has been a heart-rending experience to tie up a half-dozen McGinties in their handsome black and yellow chenille bodies and beautifully matched, white-tipped mallard wings and then to find at almost the first dip in the water, that the color from the black chenille had sprinted over and made love to its yellow neighbor thus converting it to a dirty olive green! Believe me, had the dealer who sold me that trash been accessible right then, I should have attempted to meddle briskly with his longevity.

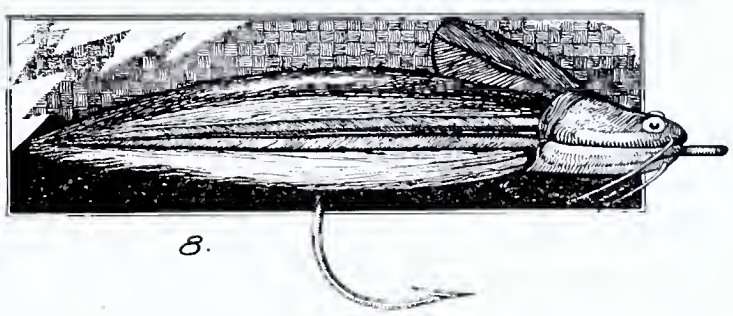
(Continued on Page 23)

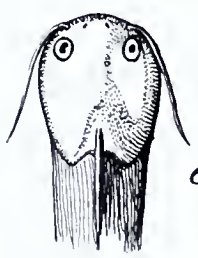












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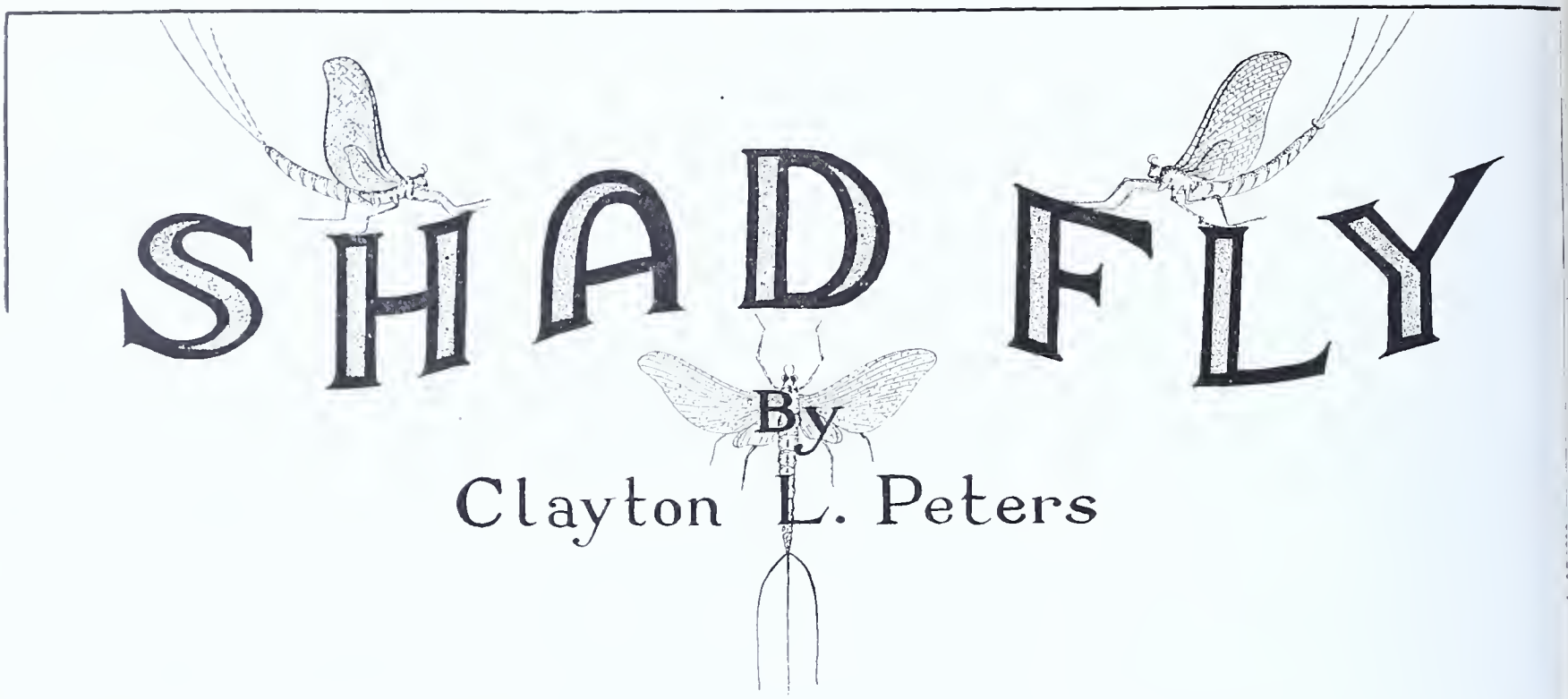


THE shad fly is one of the most graceful specimens of insect life that flies over our Pennsylvania streams. Or is it?

When we speak of Shad flies we generally refer to the graceful drakes of the Ephemera family. These flies have been so well described from time to time by Charles Wetzel, who has made an exhaustive study of the Mayflies, that no description would seem necessary, (refer to January, 1940, ANGLER).

But are we correct in calling these Mayflies by the local name of Shad fly?

Louis Rhead described the shad fly as a member of the order *Trichoptera*, a Caddis fly. This fly is a counterpart of the English Grannom, a dark dingy little sedge. The female of this fly carries a conspicuous green egg sac, making it easily distinguishable from the Alder fly of similar coloration. Another sure distinguishable mark is the absence of hair on the wings of the Alder fly, while they are quite prominent on the Caddis flies.

These Caddis or true Shad flies usually emerge at night or about dusk and only once do I remember actually seeing them emerge during the daytime. This occurred on Clark's Creek, Dauphin County, in 1936. It was a sultry warm morning and the trout were feeding ravenously. It was sometime before we were certain as to the fly that had caused the sudden excitement of the trout.

The characteristic green egg sac and hairy wings spent shaped over the body told us that these were the true Shad flies. Possibly a sudden change of temperature during the night caused them to emerge at that time and continued far into the day. We at first thought the trout to be surface feeding but the only means by which we could entice them to offer any attention to our persistent fishing was by allowing our flies to submerge, and work them near the surface.

We did not have an imitation of the fly and the nearest we could match it was a fly tied with peacock herl body and a dark dun, almost black, hackle. This fly worked remarkably well and accounted for a number of not too choosy fish. The truth soon dawned upon us that these fish were not actually rising to the surface flies, but were bulging, or taking the nymph before it came to the surface. We also noted that some fish were boring among the rocks and gravel in an earnest endeavor to dislodge nymphs.

Last season, we noticed one morning that the rocks at the base of the bridge in front of Dave Lichtenburg's camp at Paddy's Mountain, were literally covered with small black Caddis flies. At least they appeared to be black from shore. Dave immediately went to work with a black quill wet fly and took the limit of trout in a short time. Casting over the same water with accurately designed floaters netted us not a single fish, but when the flies were sunken the trout fell eagerly for the fuzzy replicas of the little dark sedge.

I would like to mention here that while visiting Charles F. "Tatter" Swank, Lewisburg fly tyer of no mean reputation, I soon found that the native fishermen along Penn's Creek are fully aware of the Shad fly and its potentialities as a real trout fly. If you happen to run across a specie of fly that has you guessing, when fishing Penn's Creek, look up "Tatter" and I'll bet my best decorated fishing hat, he'll tell you the life cycle of it.

There are several other flies that I have heard erroneously called the Shad fly. During the first warm days of spring there appears a black quill fly along the Susquehanna River that sucker fishermen call Shad fly. The large brown stone fly is sometimes called by the same name. I suppose we should take the word of Louis Rhead, but it appears that the name Shad fly has been indelibly attached to the Drake family, and we must be content to take for granted that when Shad fly is mentioned reference is being made to the large members of the Ephemeral group.

I am quite sure that the greatest thrill of trout season comes during those few days in late May and early June when the Shad hatch occurs. For those who have not been fortunate enough to experience this phenomena, let us think of a perfect evening in June with weather and water conditions ideal; but the stream seems to be absolutely devoid of any kind of fish life. You have tried all and sundry combinations of color and sizes of flies, and your patience has become exhausted, when suddenly there appears, rising from the water a graceful, long, pale yellow bodied fly. You notice the golden winged insect weakly wing its way to the nearest foliage. You scan the water and as if by magic, up pops a pair of wings from the water surface and after a few seconds rest from the struggle of freeing itself from the nymphal case, it also appears on the willows that overhang the nearest shore. Then a third pair of wings appear and a flash of silver accompanied by the sudden swirl of a feeding trout, and this less fortunate insect, with less than a minute of life, has gone the way of many that are to follow.

All this time you are trying to locate a stouter leader than the one you were using with the smaller flies, and once found, a large light colored fly No. 8 or 10 in imitation of the Green Drake is attached. By this time trout are rising as far as the eye can see along the stream, and the hatch has become so intense that they give the appearance of a snow storm. They cling to your hair, on your clothing and will light daintily on your face or hands. Such is a real Shad fly hatch as I have witnessed it several times.

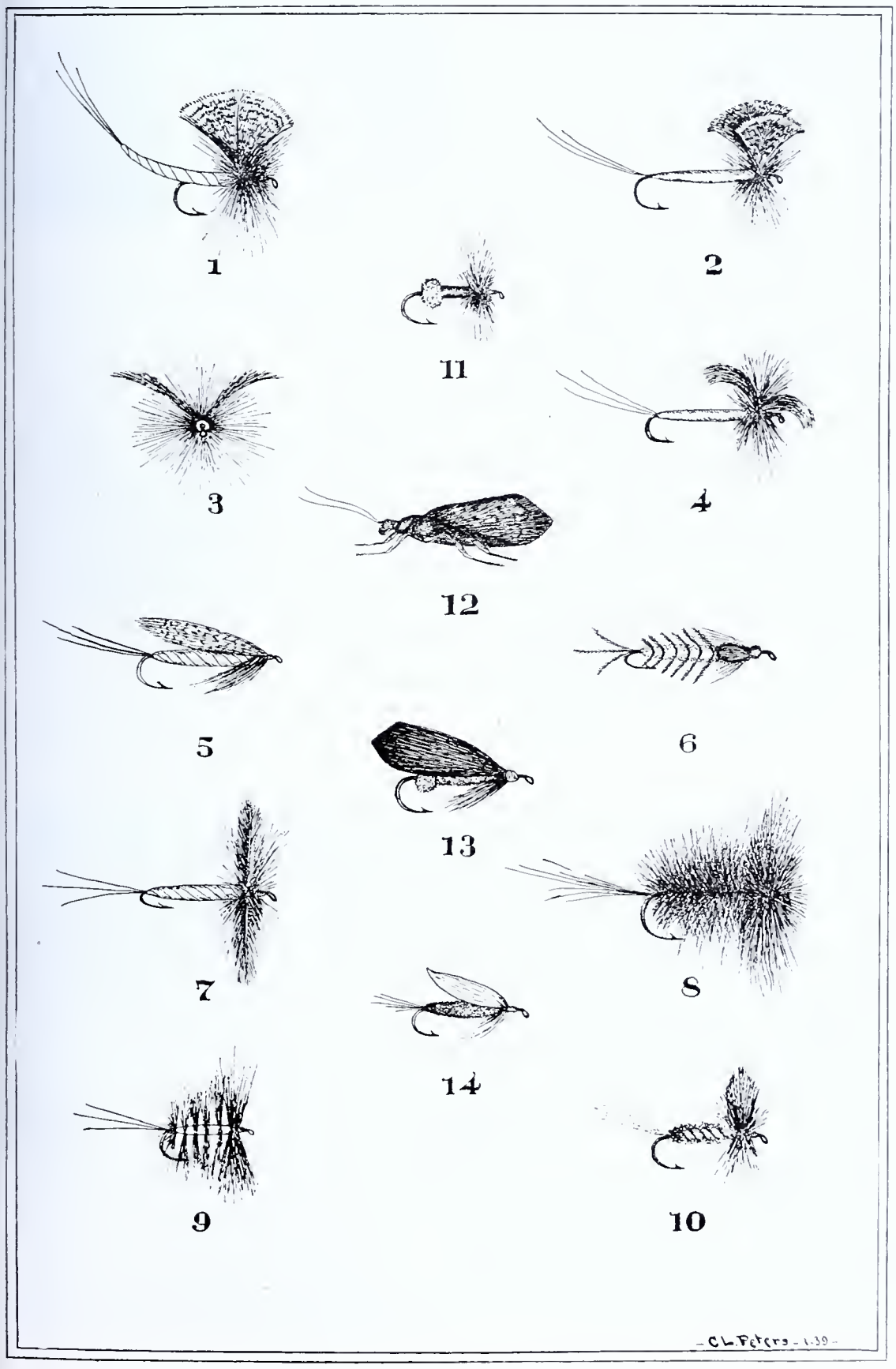
After moulting and mating the fly again descends to the water, a shiny new looking creature, where its eggs are deposited. They dance merrily a dance of death over the water, for at the end they drop to the water after exuding their eggs and float away, their mission in the scheme of nature having been fulfilled.

Trout fishing under such circumstances seems just too easy, but rest assured that such is not the case. Sometimes a big hatch of flies presents the most perplexing problems. A large trout may be rising consistently and each time you float your artificial over him another fly is taken so close to your offering that you are almost sure of a strike, but the absence of a tug at your leader proves that you have been mistaken. It may require several dozen casts over him before he even notices your fly, and even then it may be passed up for another inches from your own. The ideal time to fish Shad flies

is when the hatch is not at its peak. Although trout seem to throw all precaution to the winds during a heavy hatch, there seem to be limits to this. I remember an incident which occurred several years ago during a heavy hatch. My son continued using a small brown fly with a yellow tag, a creation of his own fancy, and took fish consistently while an old experienced fisherman standing by his side cast a very good imitation of the Green Drake tied by one of our largest tackle companies, with but one strike for his troubles. Such cases are often discouraging but illustrate the fact that trout will sometimes do the least expected thing.

On another occasion I fished by the side of Dr. Richards Hoffman of Bellefonte, an excellent fisherman who uses flies of his own creation, very delicately fashioned from the finest material. Trout were feeding all about us and the entire evening's casting netted us just one fish apiece. I am sure this was not due to the type of artificials used, or the manner in which they were presented, but that the trout had so many flies to choose from that our artificials were passed up.

Several seasons ago a friend and I were casting from opposite shores to a large trout in the center of a pool and accidentally entangled our flies. In trying to disengage them we shook them vigorously over the water. The trout in that pool were more interested in the aerial acrobatics of our yellow bivisible than the natural fly on the water. I am safe in saying that at least twenty strikes occurred before the old master of the pool finally hit the flies with such force that they become separated. On another occasion a careless cast landed over a too convenient branch of an overhanging bush. A sharp flick of the rod top caused the fly to leave the branch in an upward arc and descend slowly toward the water. What followed happened so quickly that I only know that I was fast to a good trout, and I am sure the fly never touched the water before being taken by the fish. These occurrences led me to the idea that I would like to devise some scheme of fishing a Shad fly above the water on a horizontal plane with the water's surface. This can be accomplished by fishing from shore with a long rod and having the fly attached by a loop of gut just back of the hackle.



Last season we followed the Shad fly on Penn's Creek, Elk Creek and Spring Creek. There seems to be an erroneous idea among some fishermen that the flies move upstream each evening until they reach its source. Of course, this is not true but that impression seems to be born from the fact that the hatch is retarded at the upper reaches of the stream due to a slight variation in water temperature. This difference in the water temperature is noticeable by the fact that the trout in some sections of Penn's Creek travel upstream to find more favorable conditions when temperatures prevent their normal functioning in the warmer water farther down the stream.

The Shad fly usually appears in great numbers on Penn's Creek around Weikert and Cherry Run during the last week in May, providing weather conditions are right. Usually the main hatch occurs at Paddy's Mountain a few days later and each evening it appears a bit further upstream. From notes taken the past several years, it appears that heavy hatches appear on Fishing Creek, Clinton County, and Spring Creek, Centre County, at about the same time.

Starting on Penn's Creek, last season, Clayton Bechtel of Loyalton and I followed the Shad fly from Paddy's Mountain tunnel to Spring Mills. Invariably the flies stayed in the treetops until dusk, then swarmed on the water as darkness approached, and the result was that the trout were not actually interested until in became necessary to use a flashlight to net a fish. Under such circumstances a large fly is advisable. One cloudy overcast day, the flies were on the water during the entire afternoon, not in great quantities, but sufficiently to interest the fish. This produced some of the best fish of the season.

Last season when the hatch was nearly completed at the "Fisherman's Paradise" on Spring Creek, I encountered an odd experience. A few Shad flies were still dancing in the treetops. I had spent two hours offering a very large trout all sorts of flies but to no avail.

Anticipating the return to the stream of the few remaining drakes, I tied to my leader a black drake and sat down and waited. The flies dipped lower and lower until finally they dropped to the water, exuded their eggs and floated away almost lifeless. The trout commenced feeding almost at once—but not one Shad fly did they take. Finally, I noticed that a smaller Mayfly of a darker hue was more in evidence as darkness drew nearer. I stopped fishing and caught specimens of the

(Continued on Page 21)

Fishing For Fun ... and Fish

By N. R. Casillo

A couple of years ago a friend of mine voiced the lament that there were no new horizons; that even the more remote parts of North America were overrun by comparatively soft, uninitiated sports wearing tweedy slacks and letting the guides do all the work. He continued his plaint: "Dude ranches everywhere, women tramping through regions where angels feared to tread a few short years ago. The "crowds" have driven all the moose out of our stamping grounds in Northern Ontario. It's disgusting," he concluded.

"That's because you have the wrong slant on things," I kidded.

"Whadda you mean?" he asked, frankly puzzled.

"You're not extending your mental horizons," I replied.

"Now, come down to earth," he chided, "don't you go into any fourth dimension stuff. I'm just saying you can't go anywhere anymore without running into people."

"I know, you're just lamenting the good old days and doing nothing about it."

"What can one do?"

"The trouble nowadays is that the average outdoorsman expects too much. A chap can go practically anywhere what with the easy transportation and all, and when he does select a comparatively remote place he crabs because he finds people there who sought to do the same as he. A fellow can go to places close to home or even stay at home and still have a good time. This in spite of other people, poorer fishing and an utter lack of the more exotic forms of wild life."

"Go on, do tell about this Utopia," mocked my friend.

"I've already told you—by extending your mental horizons," I repeated.

"Elucidate."

"Sure. Know more about the things that are handy. Study and observe more, especially when fishing. I contend that it's only a matter of time when we'll be compelled to do just that, anyway."

"Interesting if true," retorted my friend.

"You of all people should know that," I came back.

"But, if you spent your time studying and observing trees and bugs and things, you wouldn't be getting in much fishing," he protested.

"On the contrary you'd be doing more, if you get what I mean. Remember that all of fishing is not in catching your limit. Most all good fishermen study their surroundings. In fact that's one reason why a skilled angler usually catches a few fish even in places reputed to be fished out."

"You'll be making a nature bug of me if you keep on in that vein," he smiled.

"Well, if any one professes to be a fisherman it wouldn't hurt much to know as much as possible about fishing and related subjects," I continued. "Here, let me tell you of an incident that happened to me just a few years ago. It illustrates what I mean. Got time?"

"Sure, shoot."

"It was spring, around the latter part of April to be exact, when in the company of a pal of mine, we struck out for Wolf Creek. Some one had told us that below the bridge just outside of Slippery Rock some Virginia bluebells were in bloom. Nothing extraordinary you know, except that this particular bed was unusually large."

Many fond memories revolve about this picture of the writer, taken by his father, Charles R. Casillo, when Nick was 10 years old.

A puzzled look bespread his face but my friend said nothing.

I continued: "We found the bluebells and in doing so I got my first good look at Wolf Creek. Well, you know, I could scarcely believe my eyes. During the past fifteen years I suppose I've crossed the stream no less than a thousand times, but hardly ever paid any attention to it. Why? Because it was overrun with picnickers and students and lovers. All I knew about it was that it flowed into the Slippery Rock and that at one time, so I was told, it was alive with all kinds of fish."

"What did you see?" asked my friend a little impatiently.

"Plenty," I replied. "Just by chance I glanced into a pool and what I saw there stopped me in my tracks. Indeed, I got down on all fours and took a good look."

"My pal, a rabid and skilled fisherman, came running over to where I had stopped and asked what I was looking at."

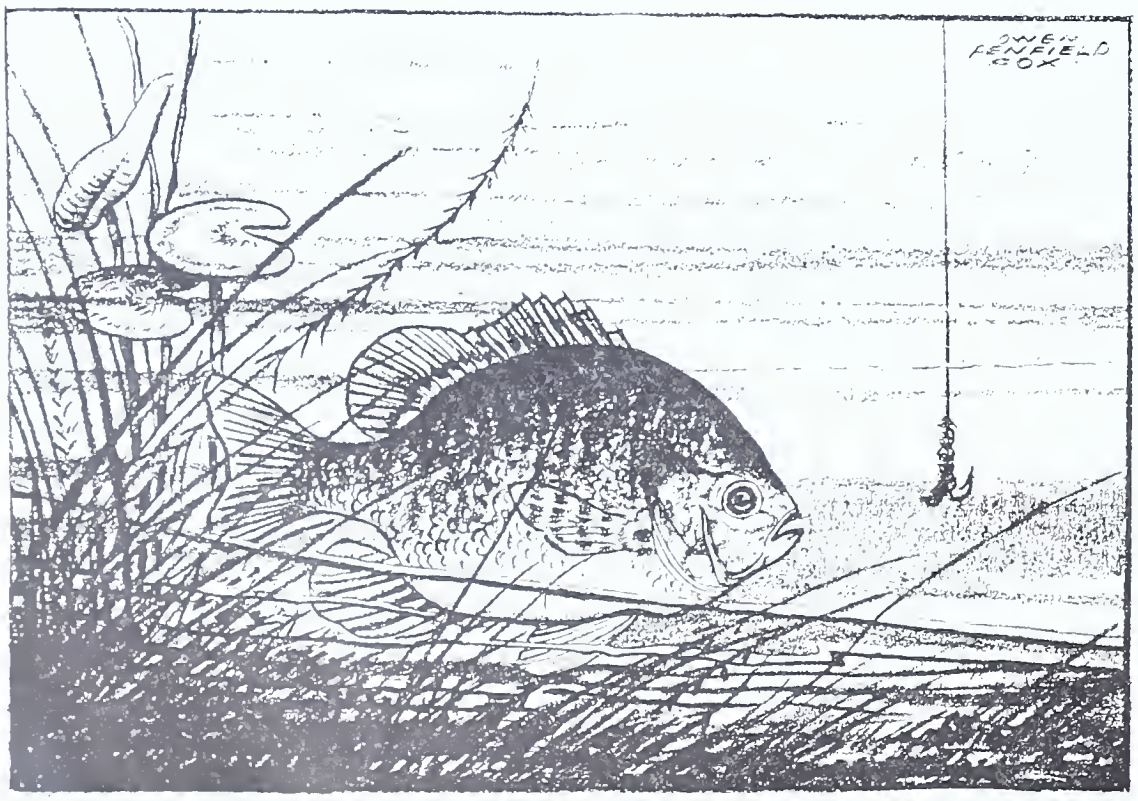
"I said, 'pipe down and look for yourself.' He did and you could have knocked him over with a hackle he was that surprised."

I paused to light my pipe while my friend chafed. "Well sir, what we saw was not one but an even dozen of the whoppingest bass any man would want to see and catch."

"After we had looked at them for some ten or fifteen minutes, my companion got to his feet, brushed off his clothing and reckoned that the hunting of a flower bed was a paying business. 'Boy', he said, 'that's the berries, and all on account of our following a harmless diversion.' And naturally, I agreed with him."

"Did you get a crack at them bass when the season opened?" asked my friend.

"Did we?" I came back. "Fishing for them marked the beginning of some of the finest local fishing I've ever experienced. During



Boyhood fishing recollections are almost certain to include the sunfish.

that summer we discovered that Wolf Creek still contained a lot of fish. Besides black bass there were rockies, bluegills, immense sunfish and some choice bullheads. On a light flyrod those babes can give one a lot of fun."

The result of the above conversation was a return trip to Wolf Creek accompanied by my converted but still rather dubious friend whom we shall call Doc, and an old standby fishing pal, Bill Klee.

It was early June and nature was at its best. The early evening shade that had descended on the west side of the creek contrasted sharply with the dazzling brilliancy that flooded the other side of the stream. Birds were beginning to tune up while myriad insects still buzzed busily in the gratefully warm air.

We left our car near the bridge that crosses the creek and made our way down through the verdure of a rich pasture. The air was fragrant with the odor of fresh, growing things and that mysterious aura that doubtlessly caused the bard to say: "What is so rare as a day in June, etc."

A few hundred feet below the bridge we came to the first of a series of ridiculously small ponds paralleling the stream. Three or four of the pools were connected with the latter by leads which wandered aimlessly about before reaching their various destinations. We stopped at the little pond and assembled our rods.

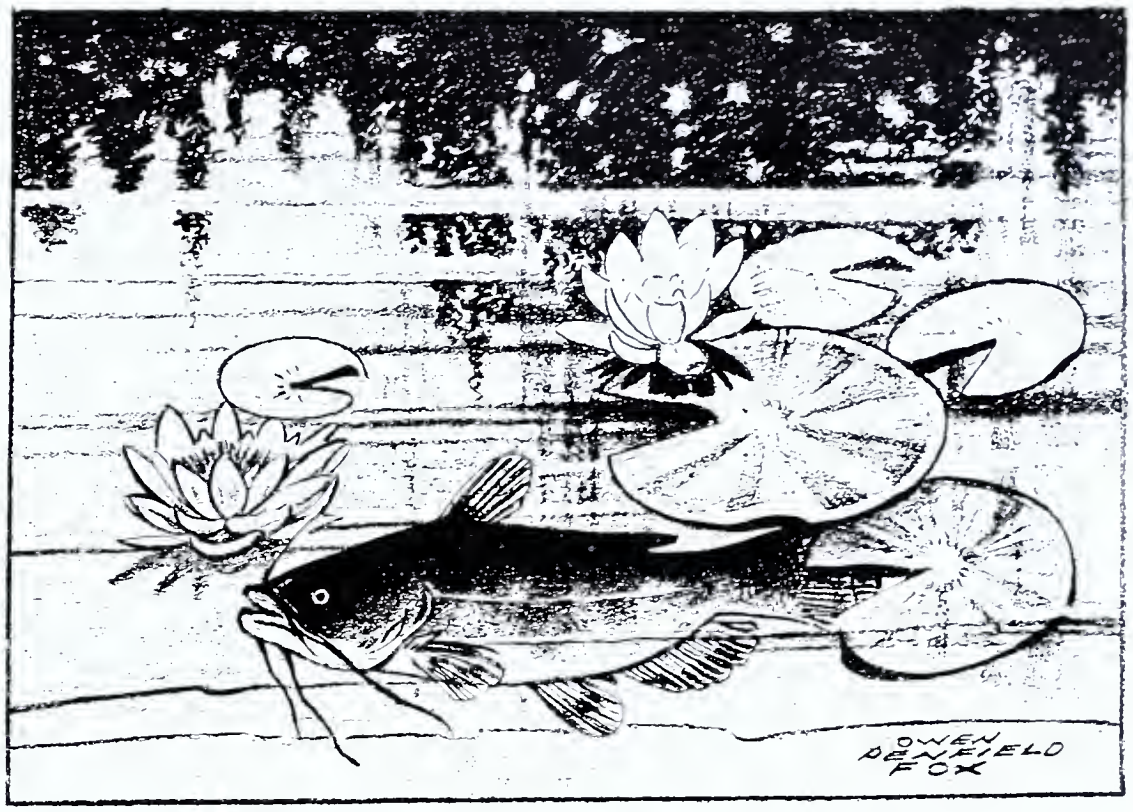
"This place looks good to me," said Bill.

"Good for what?" returned Doc as he scrutinized the slightly clouded water.

"For bulheads," replied Bill, "and I'm not forgetting that it's connected with the creek," he added. "One's likely to get a surprise."

I actually felt foolish when I plopped the night crawler affixed to the business end of my outfit into the middle of the pond. We three looked at each other and grinned as we settled down amidst that idyllic setting.

"Even if it does look foolish I'm perfectly contended," I philosophized as I lighted my pipe and settled back on the rich carpet. My rod rested on a moss-covered rock at my feet.



Another pet of boyhood (and oldsters, too) is the bullhead catfish.

I had no sooner heaved my first sigh of comfort when Bill interrupted my mood. "Take a look at your rod," he advised.

"Quit your kidding," I admonished. "It would be cruelty to move me now."

But scarcely had he gotten the words out of his mouth when I was electrified by a short protesting screech from my reel.

I sat up and shot a glance at my rod. It was bobbing violently. "Well, I'll be doggoned," I cried. "Wonder what that can be?" Whereupon I grabbed it and soon had a resplendently colored sunfish, about the size of my hand, flopping on the greensward.

"Hey, you guys, take a look at this," I said delightedly, holding up the beautiful fish for their inspection.

"Can't," said Bill, "my line is busy."

"Mine too," giggled Doc.

A few moments later Doc extracted another of those burnished sunnies from its element while Bill crashed through with a surprisingly large bullhead. The sunfish were active until we creeled eight of them. The bullheads however, worked on into the night and we could have caught far more than we needed. The creek was forgotten, at least for that night.

A couple of evenings later we fished the stream. But not before we did a bit of snooping. The region around that part of Wolf Creek is an outdoorsman's paradise. We saw snakes, more than a dozen of them. Once when I lifted a large flat rock at the water's edge while searching for insect larvae, I nearly dropped it on my toes. Imagine my surprise when seven water snakes that were under it slithered out. Five of them tho' didn't slither very far for we nailed them.

At the edge of the woods farther downstream a riotous display of wild flowers greeted us. The pastureland beyond the dilapidated snake fence was white with a profusion of bluets and spring beauties. As we edged along, entranced by what we saw, a woodcock fluttered up at our feet and winged off bat-like across the creek.

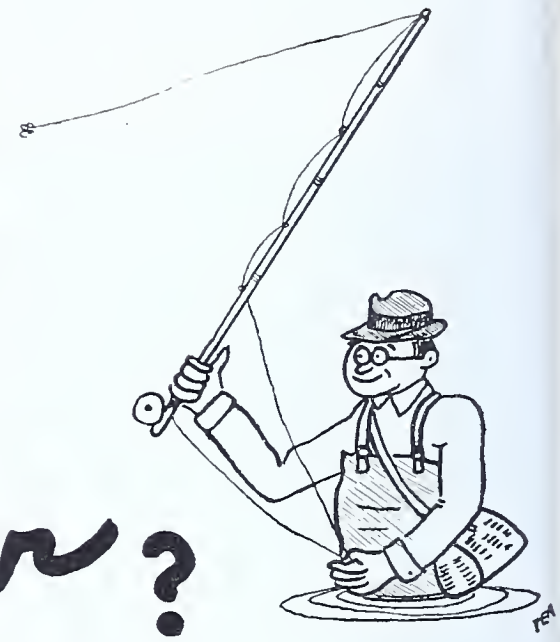
At a great pool located near where the heretofore straight stream winds around the rock base of a high bluff, we assembled our rods and got to fishing. Flyrods, of course, were again in order. Lures were an assortment of bucktails and streamer flies. Our victims, we hoped, rock bass; a hope which exemplifies the perennial optimism of the average angler. He usually calls his shots.

The rock bass were there and active; the doughty, red eyed warriors being augmented by some man-sized sunnies. The courageous fighting spirit of the former is certainly something to be admired, the diminutive fighter exhibiting a dogged persistency

(Continued on Page 18)

The bed of Virginia bluebells responsible for our discovery of fish in Wolf Creek.

WHAT PRICE ROD Spring-Power?



by PHILIP M. C. ARMSTRONG

THE Old Angler slouched comfortably against the tackle show-case, listening, with a faint suspicion of a tolerant smile filtering through the silvery curtain of his mustache, while the snappy young rod salesman went through his act of demonstrating a fly-rod.

Yes, it was the same old line of bunk, and it seemed to go over as well today as it did back in the "Gay Nineties", when old "Pop" Holloway had enchanted him with his facile Abracadabra, and sold him his first proud "Genuine Calcutta Bamboo". And a rare old stick it was, too, that old buggy whip. Many the mighty "Squaretail" that old warrior had brought to net for him in those dear departed, almost forgotten days on the then free and open Brodhead; yes, and Grayling too, when he used to visit Uncle Hector up in his Michigan lumber camp on the almost fabulous Au Sable River.

Now the salesman was vigorously swishing the suffering rod back and forth through the air, intoning his hymn of praise into the agnostic ears of the sales-resistant customer. For once, the old hooey didn't seem to be getting across. The younger generation was showing a bit of Missourian blood, somehow, seemed as though.

"Did you ever see sweeter action," went the well learned sales-talk, "Or anything faster?

"Looks kinda soft to me," observed the customer, "I was really looking for something plenty stiff, a pole I could use to poke out a good bit of line, up on the Pine. I think it bends too much. 'Course I don't really know a heluva lot about it, compared to an expert like you, but I can't see why a rod has to bend much. Seems to me it just takes that much longer before a guy can really lean on it and push, what? Maybe I'm just plain dumb. You tell me."

The Old Angler was now all attention, and listening with both ears Could it actually be that there were anglers who didn't gulp the old bushwah down whole? Seemed as though.

"Well, it's like this," the salesman expounded, "You see the rod's like a spring. The power in the spring overcomes the inertia of the line, and makes it go faster than it would if it didn't bend, and then at the end of the cast the power wound up in the spring of the rod gives the line an extra punch and makes it go faster yet. You see there's a lot of inertia in the line, and it takes a powerful spring to overcome it. Do you get it?"

"No, I'm afraid I don't," the young man replied, thoughtfully, but quite positively. "Is there some sort of engine concealed in the rod? Does the rod overcome the inertia of the line, or do I do it? I can see how a springy rod might smooth out my jerky motions a little, maybe quite a lot, but I'm damned if I can see how it can add any power to what I do. It just doesn't make sense. Conservation of Energy, you know, and all that sort of thing."

The salesman looked shocked. "Why Mr. Thomas, how can you say that? All the authorities agree that spring-power is what makes a fly-rod so efficient. Here's what one of the big-shots says. I have it right here in one of the magazines."

He read, "You should think of your rod as a compound machine, employing leverage, spring and momentum. Your hand applies the muscular power which actuates this machine. Application of this power by leverage puts a bend in the rod, and the rod's tendency to straighten *produces more power by spring.* Through a combination of leverage and spring the *rod tip acquires momentum.*"

He mumbled on for a paragraph or so, and then found what he was looking for.

"In casting, you don't propel your line, any more than the archer propels the arrow. What you do is to apply muscular power in such a manner that the rod does the casting. From a purely mechanical point of view, all the energy imparted to your line on the cast must come from the bend which you force into your rod by muscular power."

The salesman put the magazine down, with an air of finality.

"I guess that about tells the story, doesn't it," he concluded with a smile.

But the sceptical young man was still unconvinced, even by such imposing logic.

"Well," he declared, "If that guy is right he's 'way over my head, but it doesn't sound Kosher to me, somehow. I think he's squirrely. Will you tell me how a rod can *produce* power by spring, or by any other way, for that matter? I'm the guy who produces the power, not any dam' rod. The rod's just a link between me and the line, and I feed the power *through* it, and as I see it. I'm yanking on the line, and the rod's just a go-between, sorta. Sure the rod's a lever. Any boob can see that. But I don't see where it can dig up any more power than I shove into it. And the rod-tip just *can't* have any momentum to speak of, because it doesn't weigh anything."

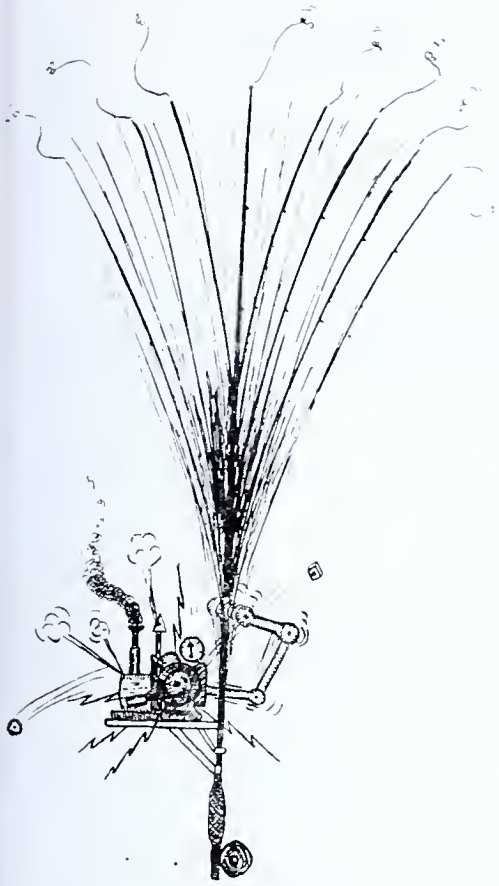
"And look here," he continued after a moment's reflection, "When he compares a rod and line to a bow and arrow he's 'way off on the wrong foot. A bow really does store up power, and can keep it stored up for ever so long, until you let go of the arrow. It's like winding up a clock, and then not starting it until you get good and ready. But a rod and line isn't like that unless the line is tied to something so it can't move while you are winding up the spring in the rod.

"The line isn't anchored when we are casting, and neither is the rod. They are both moving, all the time, right from the go-off. This bird's nuts."

The dapper salesman extended his hands deprecatingly.

"Really, Mr. Thomas, all of the authorities agree. . . ."

But he was not permitted to continue. The customer was not to be denied.



THE ROD HASN'T ANY POWER OF IT'S OWN

"I studied Physics in school, and remember something about anchored loads and moving loads in connection with springs. They have to be anchored before they can store up any energy, or power, if you want to call it that. The bow and arrow are anchored spring and anchored load, all right, but the rod and line aren't anchored, neither one of them. They're both moving, and in the same direction on a forward cast, the rod ahead of the line and its own tip. *So long as you keep the rod moving the line never catches up.*

"I don't just remember all the details of the dope. Something about time-lags and time levers. Springs distribute impulses in time, something like a regular lever does in space, though not exactly that. But is doesn't *increase* anything, just redistributes sudden power surges into steady pulls. That's it. You ought to know how it applies to fly-rods. Tell me."

The befuddled salesman gulped once or twice, then recovered his poise somewhat and passed the buck.

"Well, I admit I don't know all the technical ins and outs, but that gentleman over there does. That's Mr. Petrus Johannes. I'll get him to tell you the whole story.

He called quietly, "Oh, Pete, can't you tell this gentleman how spring-power works? He's got me a bit beyond my depth."

The Old Angler slowly straightened up from his slouch, knocked out his pipe, and ambled over to join them. He wrinkled his brows as though greatly amused.

"Charlie, I've been waiting a long time for some ornery young heretic, who won't believe every fairy-story he's told, to come along and put you smoothies into that hole.

"No, I can't tell Mr. Doubting Thomas about spring-power, and neither can anybody else. 'Cause why? 'Cause there isn't any to tell about. The boy's a hundred percent right.

"All any rod does, or can do with its spring is to iron out the kinks in the cast. Levels out the sudden impulses into a smooth application of power pulling on the line. Kind of a cushion like. That's all. Instead of letting you jerk the line violently into motion, and maybe break it, or the rod, it throttles down the surges into comparatively even pressure. It sort of teases the line up to speed gradually. By the time the end of the cast is reached it is travelling at considerable velocity, and then the angler stops his rod and lets the line keep on going by its own momentum. The line is a free agent now, and goes merrily on its way until it is stopped by air friction or is snubbed by the end fast to the reel, providing, of course, that it doesn't hit the water first.

"You see, Charlie, just as this young man discovered, the rod hasn't any power of its own. All of the energy in the cast comes from the angler's arm. Where else would it come from?"

"But Pete," objected the salesman, "Doesn't the power the caster winds up in the bend of the rod do *something?* What becomes of that. It must go somewhere, musn't it?"

"Sure it does, Charlie. But don't get wrong ideas. There isn't very much energy stored in the rod at any time, at least not due to overcoming inertia. There isn't much inertia to be overcome, not when the load is set into motion slowly. What accounts for most of the bend in the rod is *friction*, on both the rod and the line. Inertia disappears, once the line is moving at top velocity, but friction is a continuing load, and has to be kept overcome all the time, so you never get that energy back at all. The rod stays bent until the line goes on ahead of it. Then the momentum of the line takes up the frictional load. Until it does, the angler has to keep right on feeding energy into it, and the rod keeps on passing it through to the line."

"But Pete, there must be *some* of the spring of the rod that is due to overcoming inertia, even if, as you say, it is only a little. Isn't that part available for increasing the velocity of the line?"

"Charlie, my boy, don't tell me you have really started to *think?* Good for you." (The customer grinned, but remained a silent listener.) "Yes, there is a little spring in the rod, due to inertia, but you can't use it to increase the velocity of the line. Know what Inertia is? And Momentum?"

As Charlie made no reply he continued.

"Momentum, if you remember your Physics, is Mass (that's weight) multiplied by the velocity. Inertia is Mass times *change* of velocity. Important difference.

"Now get this; it's the whole crux of the matter. As the tip and line go faster, accelerate, that is, inertia must be continuously and progressively overcome, eliminated, before it can be going any faster. Is that clear?

"So when you come to peak velocity, just before the caster quits feeding in any more energy, the inertia has *already been overcome*. By what? By the power fed through the spring of the rod for that purpose. The bend remains.

"Forgetting friction, if the rod has been bent in pulling against inertia, naturally it can be bent only enough to do that job. And as the inertia is gradually overcome, progressively, it should use up exactly that amount which is put into it, and the bend of the rod should no longer exist. How about it?"

"Yes, I guess that's so, Pete," the salesman grudgingly admitted. "But even if there weren't any friction, wouldn't there still be a bend in the rod at the end of the cast? And if it was used up in overcoming inertia it wouldn't be. What goes on?"

"Right you are, Charlie, you're improving. There would be a bend left in the rod at the end of the cast, maybe even after the caster had shot his wad and let the line go off into space all on its little only. 'Cause why?

"Well, Mr. Thomas mentioned time-lag. That's the story. You see, although the inertia of the line was overcome, and the line and tip were moving at the same speed as the butt, the inertia was not overcome by

(Continued on Page 17)

THE LINE NEVER CATCHES UP TO THE ROD

TOMORROW'S GAME FISH

Shifting Trends in Pennsylvania Stream Life are Noted

By ALEX P. SWEIGART

(Sketches by A. G. Shimmel)

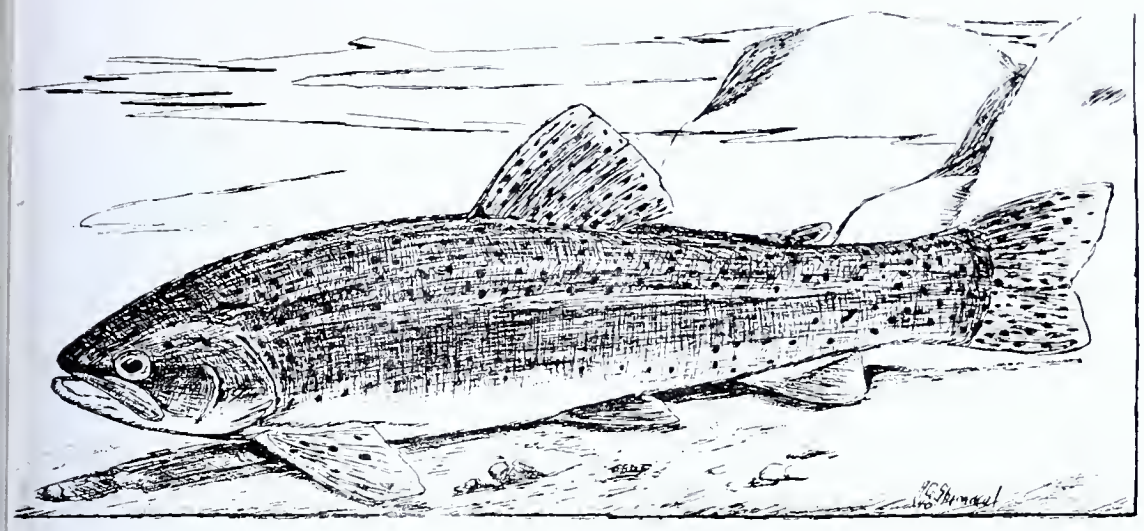
BACK in the days of horse and buggy, it wasn't a particularly difficult task to find mountain and meadow trout streams, within reasonable driving distance of many Pennsylvania communities, teeming with that native artistocrat of North American game fishes, the charr or brook trout. But lumbering operations that denuded our timberland trout stream watersheds, more intensive cultivation of the soil and subsequent erosion have changed all that . Today, in our Keystone State trout waters, the stream balance has veered constantly in favor of the European brown trout and black-spotted rainbow trout from the Pacific Slope. Ten years of drought and the destructive flood of '36 have combined to alter the trout fishing picture to an even greater extent. While heavy distribution from the hatcheries will, without doubt, continue to provide good early season creels of brook trout in stocked streams, the ascendancy of the brown trout and rainbow trout in the majority of our waters carrying over their trout population from year to year has been increasingly pronounced.

Not only has this shift occurred in trout populations in the vast majority of our major low temperature streams, but encroachment of warm water species of fish life in lower areas of trout waters has been slowly taking place during the past twenty years. Heavy production of trout by the hatcheries insures and will probably continue to insure for years to come this phase of the freshwater angler's sport in our major springfed streams, but we must face certain indisputable facts relative to an apparent shifting of the inland water fishing balance in Pennsylvania. We have already noted that drought, erosion and the cutting of cover has resulted in gradual shrinkage of suitable trout waters during the past decade. Better roads penetrating to the heart of secluded mountain areas, accessible by automobile, have brought about intensified fishing on many streams. Finally, because there has been observed a gradual extension of the range of habitat of certain species of warm water fishes in a number of typical trout waters, it is not inconceivable that the day may be fast approaching when warm water game fishes such as the smallmouth bass and pickerel will dominate the fishing picture in waters of the densely populated east.

The native charr or brook trout no longer is dominant in many of our trout waters.

Let us delve more deeply in this trend toward our future angling. In addition to showing a total mileage of 5700 miles of streams approved for stocking with legal size trout in Pennsylvania, the stream survey reveals that 3796 miles of warm water streams and 139,435 acres of warm water lakes are being stocked with warm water species of fish life. While apparently this would point to a preponderance of waters suitable for trout, mileage alone considered, certain definite advantages are linked with the so-called bass or warm water areas. First is range. With the possible exception of our large trout streams such as Bald Eagle Creek, Brokenstraw Creek, Penn's Creek and Pine Creek, most of the waters under the trout classification are small mountain or meadow streams that have been subjected to radical fluctuation in flow during the past ten years of drought conditions. Now consider a few of the warm water streams approved for stocking with bass. There is the lower Susquehanna River, over a mile in width below the Holtwood Dam; the Upper Delaware in the vicinity of Milford, Pike County, with its sweeping riffles, shallows and pools; the upper Allegheny of comparable water area; Lake Wallenpaupack in Pike and Wayne counties with a shoreline of 45 miles, and the Juniata River with its big tributaries, the Raystown Branch and the Frankstown Branch. Then there is the Pymatuning Reservoir in northwestern Pennsylvania with its shoreline of 70 miles. A thousand fishermen angling in a five mile stretch of any of these waters on the same day would not find themselves hampered or crowded; the same thousand on one of our trout streams in, let us say, a five mile radius—well, just recall any recent opening day for your illustration.

Accessibility must also be ranked a factor for comparison in considering this trend to warm water fishing. For example, it is necessary for a trout fisherman in Philadelphia, if we exclude the possibility of his fishing the Wissahickon in suburban Philadelphia or a few other streams in the southeastern counties, to drive a distance of one hundred miles or more to the streams of Pike, Monroe or other northeastern counties if he desires a wide range of waters in which to follow his sport. Easily accessible, on the other hand, is that increasingly popular stream in Montgomery county, the Perkiomen Creek, for the bass fishermen, while the wide reaches of the lower Susquehanna in the vicinity of Columbia, Lancaster county, are well within the one hundred mile radius for bass fishermen from the Quaker City. Warm water streams, lakes and ponds yielding one or more of the popular warm water game fishes, smallmouth and largemouth bass, pickerel and wall-eyed pike, are gen-



The rainbow trout shares the limelight on many of our trout waters today with the brown trout.

erally more stragetically located throughout Pennsylvania for the city fisherman who likes to find his sport in fresh water. Because they are larger generally than trout streams, there is not the probability of congestion by fishermen and over-fishing as in many trout waters.

While drought conditions, so detrimental to low temperature trout waters owing to reduction of flow and increased water temperatures, also may in extreme instances of stream shrinkage cause damage to available bass forage, some natural advantages accrue generally to the warm waters. In the past, while discussing the black bass situation in Pennsylvania, the vital part played by aquatic vegetation in game fish areas was stressed. During the past ten years of drought conditions, a steadily increasing growth of aquatic vegetation beneficial as cover for young fish and a splendid source of increased forage has been noted. More grass was observed on the main Susquehanna River, which was at extremely low stages last summer, than ever before. These dense patches of vegetation, it was found, harbored a splendid supply of minnows, and, even more important from the bass angle, crayfish. Examination of stomach contents of bass taken (many were caught in close proximity to the grass patches) revealed the presence of more crayfish than any other type of forage.

Perhaps the most noticeable trend, however, relative to this shifting of fish population balance, and one that we believe must be a decisive factor in the coming to dominance of the warm water game fish group, has been the gradual encroachment of pickerel, bass and other warm water species of fish life in trout waters.

Typical of trout waters in which this extension of warm water fish range has occurred is Willow Run, Juniata county trout stream. Having its source in the Blacklog mountains, it is tributary to Tuscarora Creek, a warm water stream affording excellent range, cover and forage for its smallmouth bass and pickerel. Willow Run offers no major barrier to free movement of fish life from the larger stream. It has been the good fortune of the writer to have made notes relative to encroachment of warm water fish life in this trout water extending back to 1922, when the charr or brook trout was numerous in many of the pools in meadowland through which the stream flows prior to its juncture with the Tuscarora. Since 1922, extensive lumbering operations have been completed on the drainage area of the smaller stream.

Referring to these notes, we shall designate as locations Point "A", at a distance of approximately two miles above the point of juncture of Willow Run with the Tuscarora; Point "B", at a distance of approximately 2½ miles, and Point "C" at approximately 3½ miles from juncture with the larger stream. In 1922, a number of large brook trout, heavy girthed fish ranging in length to 14½ inches, were taken from meadow pools in the Point "A" section. Other species observed and checked that year included suckers, run chubs, silver shiners and a few fallfish. Of the so-called warm water game fishes, not a single bass or pickerel was taken and careful observation failed to disclose any of these fish in the meadow stream area. While some competition for larval forms of insect life and other forage was offered to the brook trout by the shiners, chubs and fallfish, the charr apparently continued to hold its own at the time.

During succeeding years, however, it was noted that the meadow pools at Point "A" contained a constantly diminishing number of trout. In May, 1927, two pickerel were observed in one of the pools. The fallfish also had increased sharply in number, many being taken on fly. In May, 1934, a smallmouth bass, 8 inches in length, was taken on fly and released. As this was the first bass taken or observed, it is reasonable to assume that the pickerel was first to invade the new range in the trout stream.

Points "B" and "C" have furnished interesting data in this connection, particularly since 1930. While a few fallfish had been observed and taken at both of these locations prior to 1930, no pickerel or bass had as yet, it seemed, made an appearance. Point "B" is in typical meadowland, the stream narrowing into a fast deep channel between overhanging banks. In the few deep and narrow pools of this stream section, a number of pickerel were observed in early June, 1935. Point "C", located just where Willow Run emerges from the timberland which characterizes most of its course above this point, was observed in 1937 to contain a larger number of fallfish than ever before. Whether or not this stream section will mark the limit of the warm water game fish invasion only the future can reveal. Smallmouth bass in increasing number have been observed during recent years below Point "A" and a number of nice bass catches have been scored in this stream section during the past five years.

Of the factors that may be responsible for this change of balance in aquatic life, we should perhaps list temperature and an

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The Upper Delaware at the Delaware Water Gap.

NARY A SPINNER

By E. LLOYD KING

THERE are flies and still more flies; some big, some little; some gaudy, some somber. By stretching the imagination some may imitate living creatures; others resemble nothing that swims, flies or crawls within the ken of civilized man.

Without doubt some were designed primarily to "catch" men—to sell; others were created to catch fish. To be fair, most patterns probably take fish somewhere, sometime; in proper season others are likely to excite strikes most anywhere, any time.

Many thousands of articles on the subject of flies have been written down through the years, and countless thousands are yet to appear. Theories have been expounded and contradicted; arguments wax pro and con. Reading between the lines, one gathers many of the writers either tie flies commercially or on an amateur basis for personal use and sometimes to share with friends.

This fisherman is attempting to present the other side of the picture, the view of the optimist who ties them not, but who buys 'em by the score, and too darn often just because they're pretty.

The fellow "who ties 'em not" may not always be able to appreciate the finer points of nimble workmanship, super-delicate artistry of dying jobs or superlative qualities in materials employed. *And he is probably more lucky than he'll ever know for all of that.* His whole opinion of a lure usually resolves itself to the practical—action in the water. And action usually spells the pay-off in fly-rod bass fishing.

Almost every fly fisherman has a pet; one fly that he swears will top all the rest. Another fellow may feel equally enthusiastic about an exactly opposite pattern. A third angler will likely consider both atrocious, preferring something still different. *All three are probably right; confidence in the lure, supreme infallible faith, is half the art in taking fish.* Watch the fellow who is satisfied with his fly, forgets it almost wholly and concentrates on presentation, and you'll see the successful flyman.

Shape, color, size versus presentation and action are bugaboos sometime or other sure to haunt the flyman's nightmare, especially the neophyte. And the "sure-fire killer", the rosy hope of the beginner, always looking, hunting, searching for it and most likely neglecting the surest killer of all, self-mastery of the art called presentation.

This fisherman is no different from all the rest and has his pet flies; personal idiosyncrasies. The search for the sure-fire killer is only a misty by-gone memory; action and presentation take first rank now. Gone too are the spinners, never again to be resurrected, not in the Juniata and Susquehanna watershed anyway.

With the spinner went those pleasure-dampeners of the olden days; the 9 ft. 6¾ oz. steelhead or heavy bass action rod; the level-C or HCH line, the Pad, one or two leaders; it's a wonder the old right wing did not break plumb off at the socket. Still a 6¾ oz. rod was not too heavy when spinners were to be socked out in fast water river fishing. Power plus was sure welcome.

Now the assembly is somewhat lighter; there is more pleasure in fishing and little or no weariness even after steadily peppering away from sunrise until sunset. The rod is still 9 ft., but only 5¾ oz., the line a level-D and the leader tapered from about 018 to 014 or 012 in 9½ to 10 ft. Spanish gut.

Emancipation from spinner slavery came about only after quite a bit of trepidation and experimenting, and was motivated solely by a desire to improve casting technique and fishing pleasure. Even the most enthusiastic rooter for the spinner can but admit these tiny dodads are abominable to cast, destroy rhythm, foul readily and hit the water with too perceptible a splash. And accuracy—well some guys must be just lucky or gifted by the Gods.

True, tabooing the spinner makes the smallmouth flyman somewhat of a specialist; he must choose his fishing water carefully and his flies with a definite view to action. Without spinners deep flat pools do not usually offer fertile hunting grounds; rather the waist deep and deeper surging riffles and rapids, particularly where there are rocks, submerged ledges or weed beds. Winged, bug-like flies do not go well; streamers, bucktail and feather, with their wiggling, darting, wraith-like elusiveness reign supreme.

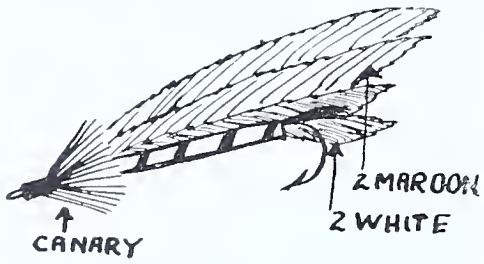
A fellow who catches nice bass at intervals is an infrequent fishing companion. Ordinarily he takes only one or two flies along, always the same pattern, and uses these until torn to shreds. Believe it or not, the bass do not seem to mind the discourtesy. And his favorite is the King Coachman described later.

But not so conservative this fisherman. He sallies forth armed with about four dozen of the flashiest bits of color any feathered or furry creature ever boasted. Pretty as the very deuce, all will take fish, but only about four ever come out of the box with any degree of regularity. These four, probably equally effective in either the Juniata or Susquehanna, are briefly patterned as follows:

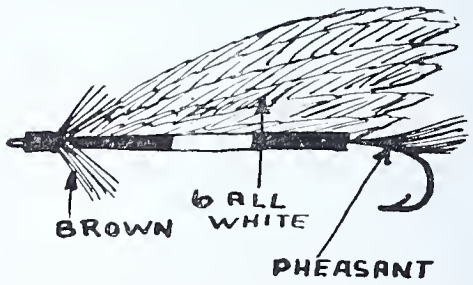
Lady Montreal: This excellent streamer is produced by a southwest manufacturer and only a few reach Harrisburg from time to time. Perhaps other sections of the State are now fortunate. Hook, #4, very thin, straight-eye, about 1⅞ inches long; body, red or maroon wool wound with golden tinsel; hackle, sparse, canary or yellow in color. Streamer feathers are about three inches long; two pure white and two deep dark maroon. The white feathers are laid one on each side of the hook and then the maroon tied on the outside. Jungle cock shoulders and golden pheasant tail. This fly comes through the water with a weaving, kicking, hesitating action and seems to take bigger fish.

King Bucktail: Offered by the same manufacturer as ties the Lady Montreal. Hook, long-shank, "ringed"-eye #4, 1⅞ inches, wrapped with tinsel, and gold or silver wire to add flash. Bucktail streamer, white and sparse, about three inches from eyelet to uttermost end. A peculiar feature of this streamer pattern is a small tuft of red bucktail, jutting downward somewhat like a billy-

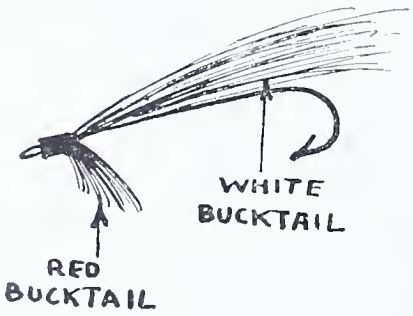
(Continued on Page 22)



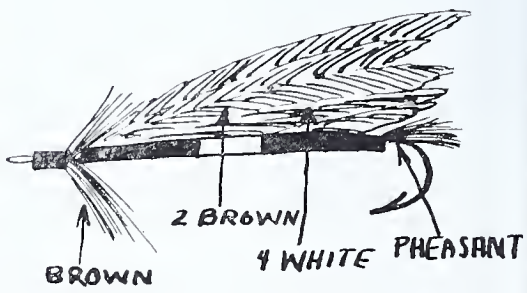
BODY- REDWOOL, GOLD WIRE



BODY - ROYAL COACHMAN



BODY – SILVERTINSEL



BODY- ROYAL COACHMAN

Question: Have heard a great deal about the trout taking qualities of the ant tied by R. W. McCafferty and also the Yellow Breeches Streamer. Could you give me his address? Where is the so-called Bread Crust fly available?—J. L.

Answer: The address of R. W. McCafferty is Palmyra, Pa. The Bread Crust, in both dry and wet patterns, is being tied by John Shapella, Middleport, Pa.

Question: What is a good way in which to pep up dry and wet flies, nymphs and streamers that were used last year? This goes in particular for several pets in my fly collection.—T. W.

Answer: Check over your nymphs, bucktails, streamers and wet flies carefully. It the materials are loose, a few turns of fine silk thread wound on the head will often be sufficient to prevent unwinding. Then touch off the thread windings with varnish or lacquer. The tea kettle is a mighty good ally in pepping up dry flies. Put about eight or 10 drys in a tea strainer and hold over steam. After the flies have been steamed, touch off the finish knot and use a hook stone or small piece of carborundum to sharpen the points.

Question: In the Susquehanna River we have a fish that is called a Susquehanna salmon. Would you please explain what kind of fish this is?—C. Y.

Answer: The name Susquehanna salmon, as applied to the wall-eyed pike or pike perch, a member of the perch family, may be traced back to colonial times in Pennsylvania, when it was stipulated in apprenticeships that salmon should not be fed more than an allotted number of times a week. Perhaps the delicate flavor and fine texture of this fish may have prompted the settlers to call it salmon on the watershed of the Susquehanna. At any rate, the name was given and it sticks today. On the North Branch of the Susquehanna, the walleye is frequently referred to as yellow bass, while in the north woods it is called the dore, picarel, and by the Cree Indians, okow. Fish culturists prefer the name pike-perch very often, as this links certain characteristics of the fish with the pike family and the perch family to which it belongs. Having the spindle-shaped body, prominent jaws and sharp fangs somewhat characteristic of the pike family, it possesses the spinous front dorsal and finely vermiculated scales more suggestive of the perch.

Question: Can I rely on last year's leaders? —J. D.

Answer: If they were cared for properly over the winter, you can. Regular silkworm leaders should have been dried carefully, placed in wax envelopes, or better still, a chamois, and then left in a dark container, airtight, and kept in a room with not too much temperature fluctuation. In preparing them for use this season, place in a dish in which glycerine or a mixture of distilled water and glycerine has been poured. This softens and seems to put new life in the gut. After soaking for at least 24 hours, look them over carefully for flaws. The loop to which the line is attached should be inspected carefully for it is at this point that the first break is likely to come. If the gut is frayed, gentle application of a rubber eraser will remove the frayed spots. New knots should be tied where necessary.

Question: Is it legal to use an automatic pistol or handgun to kill snakes while out fishing?—F. E. M.

Answer: Quoting Charles F. Stambaugh, chief law enforcement clerk for the Game Commission: "There is nothing in the Pennsylvania Game Law to prohibit the use of an automatic pistol or handgun of any type to kill snakes, nor does our law require a hunter's license for that purpose."

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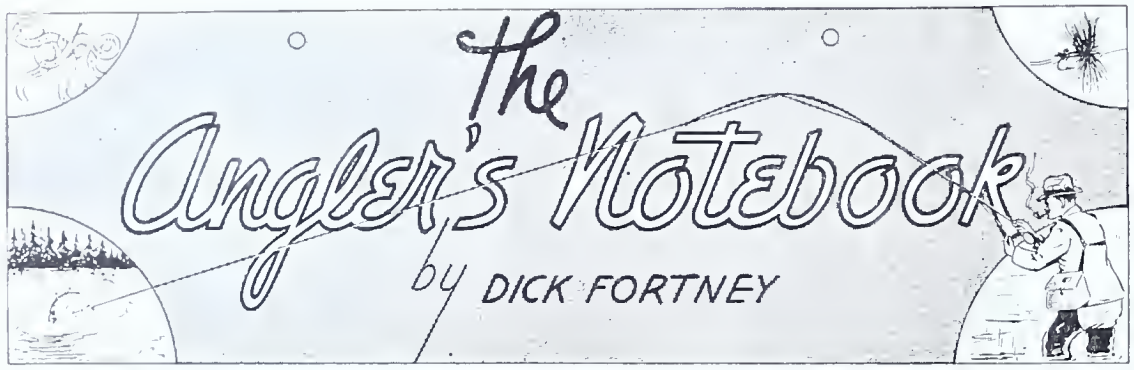
We shure hed high water furst day o' the seezun an' I ain't yet hed a chanct ter use thet new fly outfit I got rigged up with a time back. Jest like most everybuddy I met on the crick, I used worms an' even then, the trout wuzn't tew reddy ter hit. The water wuz like ice an' sum o' the trout I hooked wuz powerful sluggish in takin' the bait, moar like suckers. Figger mebbe there's sumthin' in this idear thet when the water gits tew cold it hampers the feedin' o' our trout.

Fished the medder run an' all I ketched wuz brookies. Not much size ter 'em either, jest eround 6 an' 7 inches, but managed ter git 3 rite nice brookies all eround 10 inches long. They wuz all I kilt an' thet wuz enuf fer ennybody, ter my way o' thinkin'. It shure burns me up ter see the way sum fellers hogs the fishin' when they git the chanct. Know o' 1 er 2 fellers not so fur away frum here that's braggni' now thet they hev ketched their limit three days strate already.

Now then, we mite jest ez well be fare erbout this limit bizness. I kin understand why a feller thet mebbe kin only brake away ter fish a day er so an' cums a hundred er more miles ter fish should take his limit say on the furst day. But ter hound the trout, day atter day an' week atter week an' allus try ter take the limit is jest plane greedy. We gotter figger thet there's a lot o' fishermen thet don't hev so much chanct ter git out an' like ter fish jest ez much ez we do. Gude sports allus figger the uther feller an' the sooner we cum ter the idear o' takin' a sportin' ketch the better it'll be fer everybuddy. It jest ain't common sense ter figger thet with all the fishermen we got terday, our trout fishin' kin hold up fer the seezun ef the streams is hammered ter deth the furst cuppel weeks.

I like ter fish so durned well thet I want uther fellers ter git ez much kick out o' it ez I do. Thet's the reezun I felt mitey happy ter take them 3 nice brookies an' turn back 6 uthers thet wuz legal size. A gude menny uther boys in this neck o' the woods is figgerin' like I do and I reckon thet's a mitey gude thing for our trout fishin'.

A cheap pair of nail clippers is a fine tool for cutting flies loose from the tips of leaders.



A rock in midstream, with the current breaking around both sides of it, is an ideal refuge for large brown trout. The bait or fly should be cast upstream from the rock and allowed to float down and around it. Or the lure may be cast so that it bounces lightly off the surface of the rock into the stream.

If the tip of the rod comes loose while fishing, heat it with a match and then press it back into place. The tip cement will melt when hot and when cool will hold the tip in place until permanent repairs can be made, provided the rod is used carefully.

Use only three or four finely crumbled crackers in a minnow trap. Set the trap parallel with the current, with the mouth pointing downstream. If possible, put the trap in an eddy along a bed of grass or at the end of a hole in fairly fast current.

Hooks are the cheapest part of all fishing tackle, and even the best cost comparatively little. Buy only the best.

When a new leader is finished or an old one repaired, suspend it from a brad driven into a picture frame and attach a weight to the lower end to stretch it slightly while it is drying. A dipsy sinker is excellent for a weight. When the leader is dry, take it down, coil it, and put it away in a dry, dark place until time to use it.

Washing flies in the better grade of soap chips and warm water will restore their brilliance and form.

A handy kit for greasing fly lines can be made from a cheap vanity case. Remove the powder and fill the compartment with line dressing. Use the puff, after it is thoroughly cleaned, for applying the dressing. The packet can be carried in a shirt pocket and will contain enough dressing for half a dozen heavy applications.

Break the habit of fishing only in deep holes for either trout or bass. Riffles that look shallow and uninviting contain pockets where good fish hide, and long, shallow stretches of stream will produce fish if covered delicately and with a minimum of disturbance. Fish stick to the deep holes when they are resting or have been frightened. When they really are hungry they forage in the riffles and the shallows, particularly around rocks and debris.

In fishing for brook trout with wet flies, it often is effective to use one light colored and one dark colored fly on the leader. Fish the flies deep and slowly.

Don't use a sinker except as a last resort to get bait down to trout which are feeding near the bottom. A weight interferes with the natural action of the bait, and besides it is likely to get snagged.

When you buy dry flies be sure that the hackles are stiff, standing at right angles to the shank of the hook or pointing slightly forward. The hackles also should be evenly divided, because if there is more weight on one side of the hook than on the other the fly will not float upright upon the surface of the water.

Trout like this live in the waters of North-Central Pennsylvania. The fish, a brown trout 24¼ inches long and weighing 4½ pounds, was caught last year by Stanley R. Strong, of Blossburg, in Pine Creek near Ansonia. Despite the loss of his left arm, Mr. Strong is a skilled angler, using an automatic reel.

Move the bucktail very little and not too swiftly when using it as a trout lure. Just try to imitate an injured minnow holding its own position against the current of the stream.

Don't ever hurry a hooked fish, not even an humble sucker. Let it fight the spring of the rod or throw-line, giving line when necessary and never "horsing". Land the fish carefully and prepare for a last-minute struggle that may catch you unprepared. Above all, do not risk straining the rod or pulling out the hook by attempting to drag the fish to land the minute it is hooked.

Here's a remedy for the wet fly which will not sink properly in deep water. About a foot from the end of the leader attach a tippet eight or ten inches long, and on this fasten small split shot. The shot carries the fly down but is light enough to avoid interference with its action in the water.

When fishing a stream of good size, cast the fly or bait about a yard above the spot where the trout are likely to be found. The idea is that if the lure attracts the attention of a fish as it strikes the water there is much less chance of its discovering anything artificial about it at that distance from where it lies.

Timothy stalks, tied loosely to the leader and then permitted to float with the current over likely places may fool "educated" trout.

If you have trouble, in fly fishing, in hooking trout that rise, try fishing upstream and retrievng with the icurrent. Chances are for a better setting of the hook because trout lying in current invariably head directly into it.

Glisten can be removed from gut leaders by rubbing them with soap. Or place fine mud or pumice on a soft cloth and rub the leader. Milkweed juice, if it can be found, also is good.

The best way to bleed a fish is to put a knife through the gills and into the backbone. This is a good practise if you wish to keep fish any length of time along the stream.

One way to waterproof a linen line is to soak it in fine paraffin that has been dissolved in pure benzine.

TROUT RUMINATIONS

By Russell O. Skinner

APRIL trout fishing, which in most eastern states covers the opening weeks of the season, is a bait fishing proposition, due to high roily and usually very cold water. The trout are sluggish after their wintering in the deeper parts of the stream and do not show the activity they do later on. By the first week of May they begin to pep up, moving out into the fast water of riffles and the rapids. Then the fly fisherman has his innings.

The month of May is the most beautiful time of the year on the trout stream. The trees are coming to life, and the song birds are everywhere. It is good just to be on the stream at this time, and if the weather is fair the trout will be rising.

The last week of May and the first two weeks of June are the best time of the season for fly fishing on Penn's larger streams. The water stage is about right and there are many good trout; the temperature is just right, not too cold, or too warm. You will find the trout out on the riffles, where they hover, waiting for insects and other food to drift to them, and the majority of times they come to meet it. Usually they are in the tail riffles later in the forenoon, and in the head riffles later in the afternoon and evening. But as a precaution, fish all the water carefully when starting out till you locate where the trout are lying.

It is surprising how many trout are found on the riffles. Many times good trout are taken from some riffle that later in the season will be worthless as productive water. And there is no more sporty fishing than at such a time for the trout really are in fine condition and are feeding avidly. The above naturally describes a normal spring.

As to habits of trout, it is pretty hard to classify them. Time after time I have decided on the answers, only to have them knocked screwy on the next trip out. Tactics practiced on one stream are the exact opposite on another stream. In May the trout are not so wary and can be taken with an average cast. They feed all day and sometimes through the night. There are many insects over the stream at this time and the trout can be found all over the stream moving in search of food. When they are on the shallow riffles they rise the best.

Many things have been said and much more has been written regarding weather, the moon and the theoretical pull of the tides. The dark of the moon is supposed to be the best time of the month. Personally I go fishing when I can but I prefer a cloudy day with no shadows cast. A sudden change of weather will sometimes put the trout on the feed, just before a thunderstorm or when the barometer is falling rapidly the trout rise freely.

What fly to use in May or June is largely a matter of preference, they all catch trout. Pattern is overemphasized. But when the shad fly comes on Penn's, Spring and Fishing Creeks, it pays to have plenty of the big imitations in your fly box. Last year I spent an evening on Spring Creek with two expert dry fly men, when the shad fly was on. Trout after trout was raised, hooked and lost in two short hours. The trout were monsters. One of my companions had taken four trout that particular week from this stretch that measured twenty inches or better. Believe it or not, picture shows a twenty inch trout caught about dusk in Spring Creek, one of the four he had killed that week. His method of locating these large fish is as follows: he simply takes a stroll up the stream and is very observing. One thing I noticed he does that the average fisherman overlooks, he walks very carefully lest he set up a vibration from walking on the stream bank, that will put down the feeding trout. After locating the big fellows, he casts just above to one side, and as the fly starts downstream the wings are made to quiver and invariably he rises and hooks that trout. The wing quiver can be done if you have the right wings on your fly.

The next evening we were on the same stretch of water, the flies were gone and the stream was quiet. Ephemeral, how true.

And so I say to you, Mr. Fisherman, go trout fishing when you can, but try and be on the stream that last week of May and the first two weeks in June.

That 20 inch Spring Creek brownie.

REQUEST RESURVEY OF CRAWFORD STREAMS

The Crawford County Branch Sportsmen's Council, holding its annual meeting at Meadville on March 25, elected new officers and went on record with a formal request to the Pennsylvania Fish Commission for a resurvey of county trout waters looking toward more extensive stocking before the 1941 season.

Richard S. Strouss of Saegertown, who held the office year before last, was returned President of the Council, succeeding Merle F. Bideaux of Woodcockboro, who was elected divisional director. Other officers are: John Wolfe, Meadville, Vice-President; Dr. George E. Buchler, Linesville, re-elected Corresponding Secretary; Glenn Webster, Springboro, Membership Secretary; C. W. Fay, named for his fourth term as Treasurer.

The trout stream request came through discussion on the floor of the Fish Commission's statement (in a letter to Chief Fish Culturist, C. R. Buller) that the Council had requested in 1935 that a number of previously stocked trout streams be taken from the approved list in favor of a more extensive stocking of county streams and lakes with bass and pike. The Commission offered to make the resurvey in the summer of this year with an agreement to replace on the list such waters as proved still suitable.

Only three county streams are being stocked with trout this year: Big Sugar Creek, Little Sugar Creek, and McLaughlin Run. On the list prior to 1935 were such streams as Negus, Patrick, Stearns, Kelly and Gravel Runs, the East Branch of Muddy Creek, and two branches of Woodcock Creek.

The meeting was addressed by Meadville's Mayor Fred F. Whipple, Game Commissioner Robert G. Lamberton of Franklin, and Divisional Game Supervisor H. T. Englert of Oil City. Commissioner of Fisheries Charles A. French was unable to attend, as was Fish Commission Member Fred McKean.

A TYRO SPEAKS AGAIN

By Barney Felsburg

ABOUT the time "A Tyro's Dry Fly Aces" was being prepared for printing there appeared in National Sportsman Magazine a similar article. (Incidentally the Fishing Editor of National Sportsman and all the other magazines were contacted when the Tyro's selection was in the making). There must be something to this 'averaging' business in making your fly selection for when we compare the Tyro's Aces with the National Sportsman list we find that we have the Royal Coachman and Quill Gordon in common. The Bread Crust is just a pepped-up version of the Gray Hackle. A small Badger Bivisible does a better job as a Black Gnat than the Gnat does itself. The Ginger Quill and Red Quill are so closely related to the light and dark Cahill that they can easily be interchanged. When we come to the Mosquito I am of the opinion that most everyone will agree that for our Pennsylvania streams, the Brown Bivisible or the Bread Crust Special, if you ever get to use it, will set the Mosquito in a backseat any day.

But even an Expert (or an Editor) can't fish if he only has flies. One needs a rod and reel and line also. So when, as a Tyro, we cast our eyes around for a fly-rod and the rest of the junk that would go into making our "Flivver" outfit, we ran into the same trouble we had when we tried to choose our flies—there were so many different rods and reels and lines that our head started to whirl from looking at different catalogs and reading all the different descriptions.

But if I wasn't a good fisherman, I was at least a good letter writer and once more I wrote to this guy and that guy and asked him what he thought a fly-rod for our Pennsylvania streams should be like. And once again the old-timers came through for me. Summing up the answer to my letters I found I had a rod to purchase that would be no longer than eight feet and it would have an action that sort of tapered from the tip right down to the reel seat—but at the same time not being a flimsy piece of woodwork. I later found that this rod is given the fancy name of 'improved straight taper'.

Even though I knew the type of rod I now desired, I was still in a pickle for there are lots of rods on the market. If you have enough money you can buy nearly anything you want but I'm not the richest fellow in the world, far from being nearly that, and I had set a maximum of fifteen dollars as the price I'd pay. But once more an Expert came through with the dope. He told me about a rod that hit the spot as far as everything was concerned and I checked his opinions with several other experts and they all agreed that the rod was *one* of the best.

So I ordered a two-piece, seven and one-half foot rod since I had been told that a longer rod was not necessary and that, as an old bait-caster, I would be more familiar with that length rod in my hand. The Experts didn't leave me down. The rod arrived in due time and it was a honey. But I received a seven foot rod instead of the one I ordered. Once I tried the rod I didn't care if it was only six feet long for it felt swell. I had my rod!

In rigging out the line and reel to match the rod I again asked for help. I didn't want to lay out about eight good dollars for a tapered line and it seemed that for our stream fishing all the Experts were of the opinion that twenty-five foot casts were a good maximum for a beginner to set. So the rod ended up by having an "F" level line.

But I ran into difficulties with that size line when I tried to fish some of our lakes. I needed more than twenty-five foot casts and with the "F" line the rod was overworked. That was remedied by splicing two fifty foot lengths of line together—one in size "F" and the other in size "G". Thus, to fish the lakes I use the smaller line and when I want to fish a stream I just reverse the line on the reel and use the "F" section.

I was advised against hanging a seven or eight ounce reel on the end of my three ounce rod. So one of the light steel, skeleton type reels was ordered and it weighed only four ounces. It matched the rod nicely. In order to keep the line from chafing against the frame of the reel, if the line happened to bulge through the frame of the spool, I was advised to have a thin disk of brass soldered thereon. It worked to perfection.

The reel seat was not of the screw-locking type and I was troubled at first with the reel dropping off at the most trying moments so I had a jeweler cut through the plain band that held the reel in place, thus making a split ring. He soldered a small angle to each end of this split ring; put a bolt and nut on it and now all I do is tighten up on the bolt so that the reel can't come off.

So there I had my "Flivver" outfit and I felt quite satisfied. But there is more to fishing with flies than meets the eye. You have to digest and assimilate the things the Experts tell you. You might fool around for months trying different knots and end up by finding that it has been determined long ago that the Turle knot is just as good as any knot for tying the fly onto the leader. And you'll also find out that the same applied to the "Blood knot" for tying leader points together.

In time you'll discover that you can have just as good tapered leaders at only one-half the cost of buying different size tippets and tying them together to make up any desired tapered, or level, leader you want. You'll also discover that Diamond Drawn gut is the best although it does cost the most and that you can have a good time fishing with the DuPont gut without having half the bother.

You'll find someday that Simonize wax makes just as good a line dressing as any of the higher priced products on the market listed just for that purpose. And you can also use it to wax your fly-rod and, in an emergency, dress your dry flies with it.

You'll reach a point where you think you're pretty hot, and then someday you'll find yourself on a stream and you won't be able to do a darned thing. And maybe you'll see an "old guy" come along the stream and show you dandy trout in his creel. And maybe you'll ask him how he got them. He'll tell you, too. Maybe he'll show you his method and maybe it will be a nice shiny grasshopper stuck onto the body of a dry fly with "ambroid" cement. And if you want to see a trout go mad just watch one when it sees a 'hopper' rippling the surface of a pool.

Maybe you'll even try that stunt with Shad Flies when the hatch is on and you haven't an artificial in your book. And you'll feel swell all over when you discover that the "old-timer" didn't let you down and you get your share of strikes.

Or maybe you'll be fishing Rapid Run and find that there isn't a fly among those of the Tyro's selection that any self-respecting trout will consider. And maybe you'll set down on the bank of the stream and curse what all the Experts ever told you, and by me, that those flies were any good. You'll probably light up your pipe, or a ciggy, and look at the stream in disgust. And unconsciously you flick a little yellowish-white bug off your hand and it will fall into the stream and your eyes will pop out of your head when an old wallopping brownie comes up and knocks the daylight out of that fly. And then your head will start to buzz and you'll put two and two together—which will find you on the right road to being a real fly-fisherman—for you'll take the Bread-crust Special in your book that has the lightest yellow body; you'll strip the hackles from it and wind in their place the hackles from the lightest Ginger Quill you could find in your book. And you might look at your creation with doubt. But you'll send it out on the water with a prayer and maybe, if the Gods are with you, you'll get a mighty strike. And once again you'll feel good all over and if you are natured like I am, you'll probably christen your creation with a name. In my case, for excellent reasons at the time, I called it 'Bedy's Pet' and so it has been known from that time on.

And so it goes—it's not hard or real expensive to get into this fly fishing game. But once you get there, there's agony and joy to follow. But you'll feel more like a victor when you fool a trout on something that he really can't eat. You'll feel wiser because you fooled them. Sometimes it's hard to fool them though—you'll find that out, too.

"Only wise men", quoth the sage, "admit that they are dumb".

PLAN NURSERY POND

Plans for a trout nursery dam near Johnstown were discussed at the regular meeting of the Johnstown Sportsmen's Association, success of a venture over last fall and this winter being the incentive. Approximately 2,000 brook trout were reared by the association, from fingerling size to an average of much better than the legal minimum size of six inches.

George H. Goebert, veteran treasurer of the association and chairman of the fish committee, was instructed to make a survey and submit plans for construction of a rearing pond. Fingerling trout are furnished by state and federal hatcheries to sportsmen's organizations that agree to feed and rear the fish to legal size before stocking them in the streams.

What Price Rod Spring Power?

(Continued from Page 9)

the spring of the rod at all, but by additonal energy fed through it by the caster, and the energy wound up in the rod by the resistance of that same inertia still remains wound up in it."

"But even though the tip and line are moving at the same velocity as the rod they are some distance behind where they would have been had the rod not been bending. That is what we call time-lag, or distance-lag, if you prefer, as mathematically time and distance are interchangeable. We can speak of time / distance-lag, if we want to be high-brow.

"Now maybe you can understand what becomes of the spring of the rod. The time / distance by which the tip and line lag behind the rod itself has to be made up, and that is the job of the spring in the bend of the rod. Ignoring loss it can restore, in recoiling, exactly the amount of time / distance by which it fell behind during the process of distortion, no more, no less. When the tip has straightened it has taken up the time / distance-lag. It also has no energy left to do anything else, and therefore cannot add a particle to the velocity of the line."

The customer now took a hand in the discussion again.

"Would you mind answering one question, Mr. Johannes? I think I understand everything so far. But there is one thing I have noticed, or think I have, which puzzles me. Sometimes, when my fishing pal makes a long power-cast, it seems to me that, just for the tiniest instant of time, I have the idea that there is sometimes a small loop of line actually leading the tip of the rod, after he stops pushing on it, while the rod is still partly bent. Can that be? If it can, how can it?"

"You young devil. Putting the old man on the spot, eh? Well, maybe you have. To be honest with you, I don't know. I have thought I noticed what you speak of, but it all happens so quickly that I don't want to put out my neck and make a positive statement.

"Here's what it looks like to me, but until we get slow-motion movies of it, by some fortunate break, it's purely speculative. I think the condition *could* occur, and very likely does, but only when the line velocity is greater than the speed of rod-tip recovery under load.

"You see there are several things we have to take into consideration in designing a rod. One of them is resilience, by which we mean the capacity to recover from distortion rapidly. A spring may be capable of storing and delivering a large amount of energy, yet do so relatively slowly, that is with a lot of extra time-lag. Yet a comparatively weak spring may still be able to deliver its lighter load in a shorter period of time.

"For this reason, where a rod is not brisk in recovery it may well be that the line travels faster than the tip recoils. When that is the case it seems quite possible that the line may lead the top at the end of the cast. Maybe the line velocity is always greater than tip recovery velocity. I cannot say for sure, but it isn't at all unlikely. It often looks that way, but it may be only an optical illusion. We'll have to wait for these new-fangled high-speed movies to answer that one. I won't stick out *my* old neck.

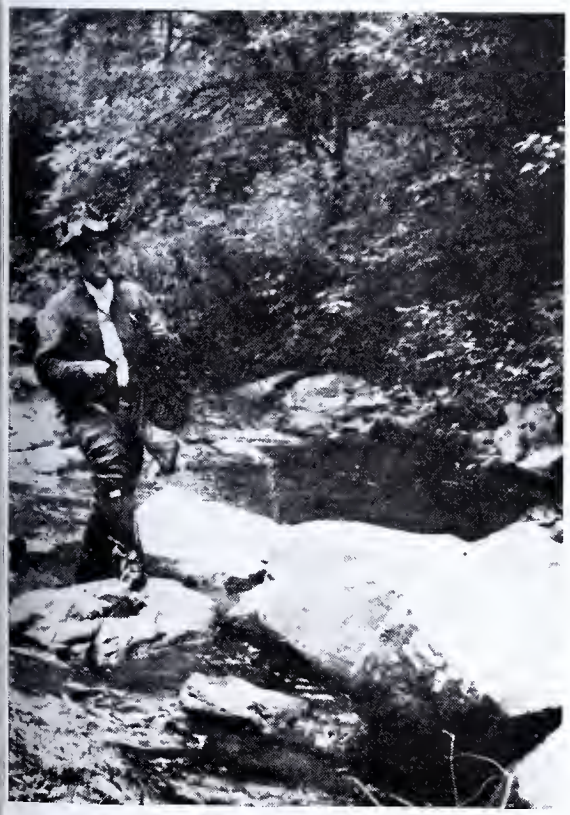
"But I will go on record this far. The rod which is most efficient for distance is the one you can move at highest tip velocity in the direction of the cast, and don't let anybody tell you any differently. That, young man, is the stiffest rod you can get your hands on.

"Action, as they call it, is nothing but time-lag and recoil pattern. If you have skill enough, and know-how enough, you can duplicate the action of *any* rod with any other rod which is stiffer and not too heavy. If you don't have that degree of skill, or are too lazy to make the effort, then a well designed rod will help a bit. But it won't take the place of expert handling.

"Action really is nothing but a concession to lack of skill or to indolence or both. But for the love of Mike, don't say I told you that. I don't want to get into any more fights. I am an old man.

"Good bye, boys."

It always pays to carry a spare rod and reel when on a trip into the back country, or at least some spare parts and materials to repair them if necessary. A click spring in a single action reel is one thing that is apt to break and a replacement is therefore advisable. Also lacquer cement, silk thread and a guide or two, and the necessary tools. These things have saved many a fishing trip from becoming a total failure.



The writer on a favorite Pennsylvania stream.

What Do You Know

about the poisonous snakes of Pennsylvania?

THE first three questions have three parts, each of which count 5% towards your total score. Each of the remaining also count 5%. If you make a score of 80% you have a very good knowledge of our native poisonous snakes. 70% is fair. If you make under 60% you should read up a little on the subject. The questions are presented in such a way that certain answers are indicated. to eliminate alternative answers. When you have finished, turn to page 18 to check your score.

1. Name the different kinds of poisonous snakes native to Pennsylvania.
2. Name the three *most* distinguishing characteristics that readily identify *any* of these poisonous snakes.
3. Name the three most important steps of the procedure in first aid treatment of snake bite.
4. From the bite of which would you be least likely to recover?
5. Which causes the greatest number of snake bite accidents in Pennsylvania?
6. Can you tell a rattlesnake's age by its rattles?
7. What principal use does a snake make of its poison?
8. Why do snakes hibernate in Pennsylvania?
9. Why are these snakes called pit vipers?
10. Can they be made harmless by extracting their fangs?
11. Why don't more trout fishermen and grouse hunters see poisonous snakes?
12. On a real hot summer day, are you more likely to see a rattler resting in the sun or in the shade?
13. If a hungry rattler saw a frog and a mouse, which would it be most likely to eat?
14. Are the baby poisonous snakes of Pennsylvania born alive or are they hatched from eggs?

Expert fly fisherman, Pete Schwab, of Conshohocken, in action on a pet trout stream.

. . . ANSWERS . . .
What Do You Know About Poisonous Snakes

1. (a) Timber Rattler, Banded Rattler, or Mountain Rattler.
   (b) Copperhead.
   (c) Swamp Rattler, Black Snapper, or Massasauga.
2. (a) fangs
   (b) pit between eye and nostril
   (c) vertical eye pupils. (Harmless snakes have round pupils, no pits)

   If your answer was "triangular head" it should be counted wrong, as some of the harmless snakes have more of a triangular head than the Massasauga. If you mentioned "Blunt tail" it should be considered incorrect. The Copperhead has a *short* tail, but it is not blunt. Any character (such as rattle) that does not apply to all three should also be counted incorrect.
3. (a) Incision, or cutting open the punctures.
   (b) The tying of a ligature or tourniquet above the bite.
   (c) Applying suction, by mouth or instrument.
4. The Timber Rattlesnake. The Massasaugua might have more virulent venom, but it does not grow as large as the Timber Rattler, and has less venom. A very small percentage of Copperhead bites are fatal.
5. The Copperhead.
6. No. They are frequently broken off, and few large rattlers have a complete set. They do not add a definite number each year; probably average from three to five.
7. For killing its food. Its use as a defense measure is purely a secondary one, if not coincidental.
8. Because they are cold blooded animals and would freeze to death in the winter. They would of course have a difficult time in procuring food even if they were warm blooded.
9. Because of the pit-like organ located between the eye and the nostril.
10. No. They are constantly replacing lost fangs. The scratches made by other teeth might possibly permit some poison to enter the bloodstream.
11. Most trout fishermen fish early in the spring before the poisonous snakes come out of hibernation. Grouse hunters legitimately hunt after the snakes are denned up in the fall.
12. In the shade. Being cold blooded creatures (blood approximating temperature of the air) the hot temperature on the ground in mid summer would be very uncomfortable. Rattlers have died from short exposures to extremely warm sunshine.
13. The mouse. Rattlers prefer warm-blooded prey.
14. They are born alive.

This fine creel of brown and rainbow trout was taken on streamer last season by Tom Forsythe of Harrisburg. Spring Creek, near Lemont, Centre County, yielded the catch.

Fishing For Fun . . . and Fish

(Continued from Page 7)

matched by no other finned, freshwater denizen. On one occasion, for purposes of experimentation, I hooked and landed, unhooked and replaced in the water, the same fish six different times within an interval of fifteen minutes. How do I know it was the same fish? Because he was never out of sight, always returning to a rocky cranny a few inches below the surface, like a prize fighter to his corner. After the final "unhooking" he returned to his corner a bit groggy, but still raged about looking for that feathered traitor. He deserved his freedom.

We remained at the pool until we quit for the day. Doc was tickled because he was high man, scoring with an even dozen of combined rocks and sunnies. His lure was a home made bucktail.

"I never realized a fellow could have so much fun with pannies," he admitted. "Besides," he added, "We haven't encountered any other fishermen in the two days we've been out."

"Didn't you find them good eating?" asked Bill.

"Yeah, tops."

"Right you are," said Bill. "Takes mighty good fodder to top a mess of nicely browned slabs of rockies or bullheads—you know, done until they just begin to curl."

On our way through the wild apples, haws and other thorny growths covering certain areas of the pasture we encountered in turn, a skunk and a bull. The first passed us up, but the latter, a young and over-enthusiastic animal, came toward us snorting and truculently shaking his heavy head. There was nothing we could do but give way and retire to the heavier growths until his curiosity or something was appeased. Anyway it furnished an exciting sequel to an already eventful episode.

I know a group of men who went into a remote wilderness section to catch the bass and lunge with which the lakes were said to teem. They caught plenty of game fish, but the most memorable incidents were the evenings they spent fishing for bullheads in a hole in front of camp. Of course, the pleasantries of good fellowship were the attributes that made the bullhead sessions so memorable; the elements that go into the making of a good time being intensified by the fact that catching fish was of secondary importance.

If you are one of those unfortunates who must have at least 250 square miles of uninhabited territory to add glamour to your fishing, then, you're in for a lot of disappointments, unless you are a Croesus and can spend both time and money indulging your pastime. And, I might add that no amount of money will buy the homily pleasures experienced by the average angler.

Change your attitude (and that means your philosophy), and tactics and remember that you can have just as much fun fishing in the river down by the railroad tracks as you can in the most isolated country.

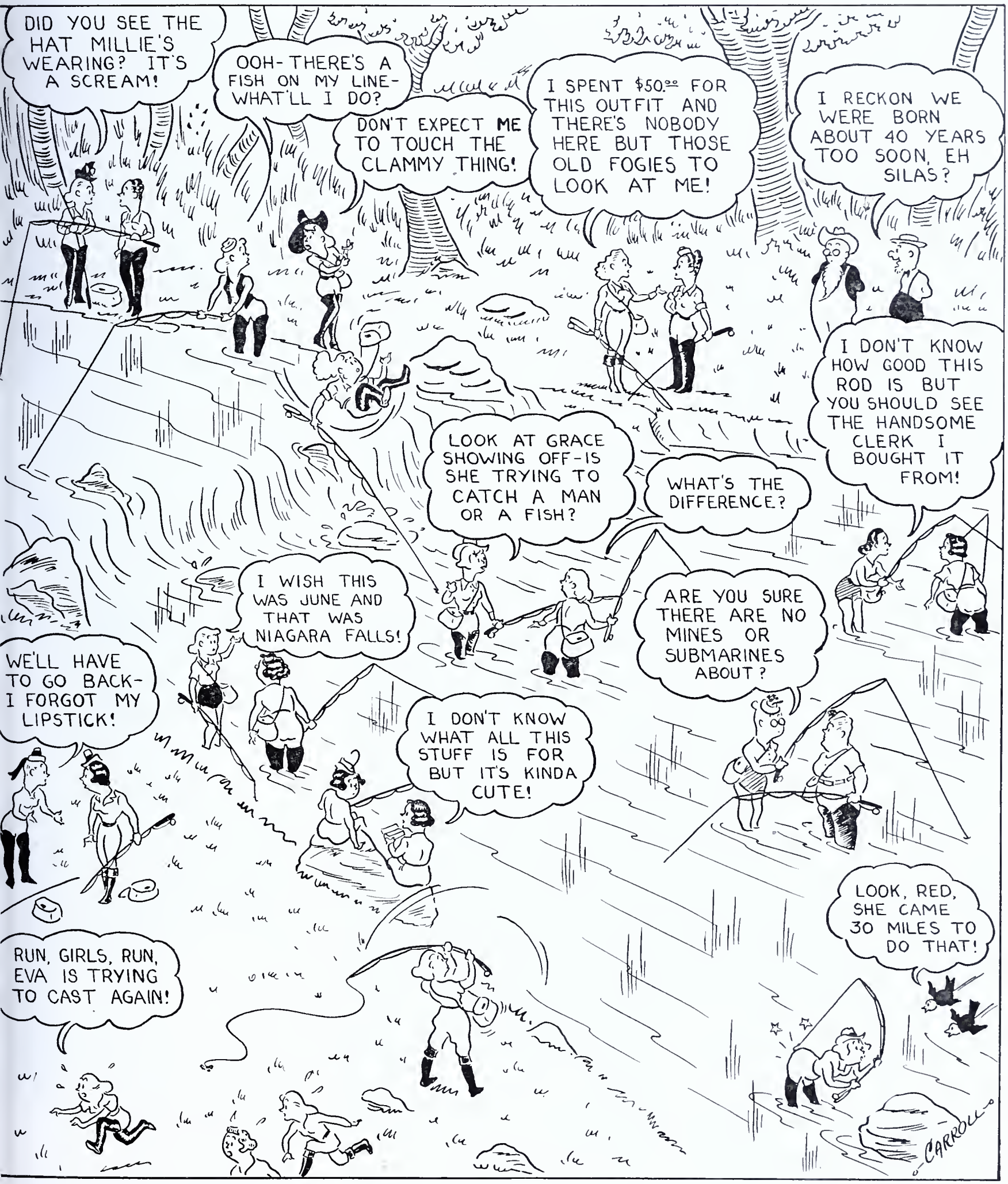
Frequently, after getting back home from a wilderness trip, friends will phone inviting me to join a group going on a local fishing jaunt. The conversation usually runs in this vein:

"I don't suppose you'll want to go after fishing up there in such and such, etc., but we are making up a little party to fish the Shenango down by the water works tonight. How about it?"

Maybe I'm a fishing fool, but fishing is fishing, so I invariably answer: "Count me in."

A good breeze is the fly or bait caster's best ally, for by rippling the water the wind breaks the line of vision between the fish and the fisherman and makes less likely the chance of a frightened fish. Particularly is this true in lake or pond fishing.

MILADY GOES A FISHING



MIDDLE ATLANTIC
ASSOCIATION OF CASTING CLUBS

An association of sportsmen's clubs formed to promote tournament casting, encourage organization among anglers assist in conservation; and support all moves toward true sportsmanship.

Chairman Lorrin Ott called a meeting of the rules committee on Tuesday, March 26th. After much discussion several minor changes were made in the existing rules of the Association. With few exceptions the new rules coincide with those of the N. A. S. A. C. in the fly and plug casting events and the surf casting events will be conducted according to the rules of the Association of Surf Angling Clubs. The only exception in the latter being that the reels are unrestricted. Harold B. Lentz, former world's champion surf caster is a member of the rules committee in both associations, and he expressed the opinion that mechanical devices on surf reels would hinder rather than aid the distance casters, except possibly the novice. The complete tournament rules are as follows:

RULES

All the events of this tournament are open only to members in good standing of clubs affiliated with the M. A. A. C. C., or clubs which may become member clubs of the association prior to June 9, 1940, the date on which the tournament will be held.

RULES AND REGULATIONS FOR INDIVIDUAL EVENTS

⅜-oz. Plug Accuracy Event—Either all-wood plug or standard plug with metal cap; rod unrestricted; line must lift at least a 9-lb. weight off floor. (Note: Some lines sold as so-called "9-lb. test lines" will not do this.) Reel unrestricted! no trace or double line at plug-end of line; ten targets—28-inch bicycle tires, placed in the water at random and at unknown distances not less than 40 ft. and not over 80 ft. New rule—if a contestant's line breaks, his score on that particular cast is counted where the plug lands, just as if the line had not broken. (Prizes in this event to be awarded on basis similar to "Lewis-Class" system—Scores to be divided into three classes; 1st, 2nd and 3rd prizes in each class, and prizes of equal value in each class.)

⅝-oz. Plug Distance Event—Rod unrestricted; line same as in Plug Accuracy Event rules above; reel of standard manufacture other than free spool tournament reel. Five casts—the three longest will be added and divided by three to determine average. (1st, 2nd and 3rd prize.)

Fly Accuracy Event—Rod—single handle and not over 9½ ft. long; reel must be mounted on rod; fly—standard white dry fly; leader—single, unweighted and not less than 6 ft. long; line—unweighted, 3-diameter tapered or level, not in excess of .060 in measurement at any point (known as "A" line); ten targets—28-inch bicycle tires, placed at random and at unknown distances not less than 30 ft. or over 50 ft. Fly must remain on surface of water until Judges have scored the cast. If fly strikes water on a forward or false cast, it will be counted as a cast, scored and so announced by the Judges. Each contestant shall cast at all ten targets consecutively and without interruption. (If number of entries in this event warrants, scores will be subdivided into three classes and prizes of equal value will be awarded in each class, as outlined in Plug Accuracy Event.)

Fly Distance Event—Rod, reel, line, leader and fly same as used in Fly Accuracy Event. Single-hand cast. Reel must be attached to rod and no assistance may be given to caster. Score shall consist of the average of three longest casts made in two minutes—timed from the first cast on which the contestant calls "cast". (1st, 2nd and 3rd prize.)

(Note: In Fly Accuracy and Fly Distance, no cast shall count if contestant loses fly and no time shall be allowed for replacing fly. (It is anticipated that fly casting will be arranged again this year so that there will be water behind the caster as well as in front of him.)

Surf Casting—All events will be conducted according to rules as adopted by the Association of Surf Angling Clubs, except that reels are unrestricted. Briefly, lead not over 4 ozs. in weight; line must be linen, but unrestricted as to size; rod unrestricted. Three events: 1—Accuracy Event (as decided upon by the Judges); re-entry is permitted in this event only. 2—Distance Event—the longest cast made of a total of three casts. 3—Average Event—three casts, which will be totalled for average of these three casts in this third and separate event. (If the number of entries warrant, scores in the two last-named Surf Casting events will be divided into several classes, just as described in the Plug Accuracy Event, and prizes will be awarded in each class.)

Dover Fishing Club of Philadelphia

The contemplated "Baseball Night" originally announced for April was postponed until the meeting of May 15th. This has been a regular spring feature for the past three years and a big night is anticipated. The picture is called "Touching all Bases" and is shown through the courtesy of the Philadelphia Athletics. The speaker at this meeting will be the Hon. Eugene C. Bonniwell, Judge of the Municipal Court, who will address the members on the subject of Law and Sportsmanship. Another feature at this meeting will be awarding the winners in the annual intra-club tournament to be held this year on May 12th.

Jimmie Dye is coming out with some novel plug casting events at the intra-club tournament this month. When questioned he said, "Fish-O or Squish rules are out". "This is going to be a tournament and it doesn't seem right to ask a good caster to throw away all of his special equipment just to satisfy the novices and the tackle manufacturers. Our percentage system of handicapping will give everybody an equal chance and furthermore, the use of scientific equipment in tournaments has done a lot to make better anglers out of us".

Mr. Jack Lamping, publicity director of the Long Beach Board of Trade, is arranging with Dr. C. Chas. Hankinson, chairman, of the club trip committee, for a real Dover Outing on Long Beach Island this summer, the exact date to be announced later.

The death of Dr. Edw. L. Gramm on April 1st this year is a serious blow to the legislative branch of the club. His untiring efforts at stream purification and the conservation of marine life during the fifteen years that he was an active member of Dover have done considerable to make this club one of the leaders in angling activities in the East. The president is having a rather difficult time in selecting a new chairman to head that committee. Temporarily all legislative questions are being handled by the committee's secretary, Mr. L. Richard Dressler.

Gloucester County Game & Fish Association

This association meets every last Tuesday of each month at the Franklin Hotel, in Glassboro at 8:30 P. M., excepting July and August.

Field Trials for hound dogs are held annually in October. Field Trials for bird dogs are held each Spring, usually in March. An annual venison dinner is held each year in January. Outings, ladies' night and special other features are held throughout the year.

The Bird Dog Field Trial Committee in charge of the planting of feed patches throughout the county are now busy with the preliminary work of planting additional feed patches and when this year's work is completed there will be about one hundred more or less permanent feed patches scattered throughout the hunting territory of the county.

The Gloucester County Game and Fish Association is very proud to be a member of the Middle Atlantic Association of Casting Clubs, and expresses its sincere appreciation to the "Pennsylvania Angler" for the space used above.

Holmesburg Fish and Game Protective Association.

The May meeting of this club will be held on Monday the 13th. The meeting last month was one of the most interesting on record with an exhibition of hunting dogs from the Happy Valley Kennels. A picture sponsored by the United States Secret Service Department, exposing the mysteries of counterfeiting helped to fill up the evening and brought a good many bank notes out of member's pockets for examination.

A successful trout fishing trip along the Upper Lehigh opened the season for about thirty of the members on April 22nd. Charcoal burners were taken along and at the end of the day an appetizing trout dinner was enjoyed in the open air.

With daylight saving time back again the casting field in back of the club house is in use every night. The boys are out there preparing to take away some of the prizes at the M. A. A. C. C. Tournament on June 9th. They also have their eyes on that cup.

Lower Merion Rod and Gun Club

Four rifle teams of the Lower Merion Rod and Gun Club have just completed a series

of interclub rifle matches held during the past twelve weeks in the club's indoor range in Narberth. The winning team members, arranged alphabetically and not in order of scores, are as follows: Joseph Boyle of Drexel Hill, Lloyd Colvin of Narberth, Ellen Dietrich of Philadelphia, Henry Hopkins of Narberth, A. S. Hutton of Narberth, H. K. Merkle of Drexel Hill, Fred Plumridge of Larchmont and Ross S. Williams of Roxborough. Henry Hopkins was captain of the winning team.

The five highest average scores during the twelve weeks were made by the following: first, Fred Plumridge of Larchmont; second, G. Sherman Williams of Roxborough; third, Lloyd DuBois of Merion; fourth, Walter Meisen of Narberth; and, fifth, Henry Hopkins of Narberth.

Each year this club holds a Spring Outing and Picnic, the date for which this year has been set at Saturday, June 15th. As in previous years, this affair will be held on the Ridgway Farm at Bethayres, Pa.

Among the events which the Picnic Committee has arranged for club members and their friends are: Fly, bait and surf casting, pistol and rifle matches, trap shooting, water boiling contests and games of quoit. Valuable prizes are to be awarded in the various events. The basis on which these prizes are to be awarded has not yet been determined. Last year, however, there was much favorable comment and good feeling among those who participated in the various contests when the prizes were awarded on a basis similar to the "Lewis-Class' system, whereby novices received prizes as well as the more skilled.

The Lower Merion Rod and Gun Club meets on the third Wednesday of each month (except in July and August, when meetings are suspended until September) at 8 P. M. in the American Legion Hall, Narberth.

Ellen A. Dietrich (Sec'y),
2116 W. Venango Street,
Philadelphia, Pa.

Pennsylvania Fish and Game Protective Association

At the April meeting this club entertained the Hon. Grover C. Ladner as their guest speaker. His subject was the Schuylkill River Valley Restoration Association. At the conclusion of his talk the club made a resolution to give this project their complete support.

Extensive preparations are being made for the annual Spring Outing this month. There will be plenty of fishing for the members, plenty to eat, and they will have an opportunity to participate in numerous outdoor sports.

Royersford Hunting and Fishing Club

The Royersford Hunting and Fishing Club will hold its regular monthly meeting Monday, May 13th, 1940, at 8 P. M. o'clock in the Friendship Fire House, Green Street, Royersford, Pa. Moving pictures will be shown by the Schuylkill River Valley Restoration Association, showing the existing pollution of the Schuylkill River.

During the winter months members of this club have been busily engaged tying flies for the 1940 fishing season. Others have taken part in "tall stories" contests staged from time to time at the club's meetings.

SHAD FLY

(Continued from Page 5)

fly—the Bi-color Walker, a ruddy colored fly with transparent wings. The legs of this fly are of two colors, the hind and middle legs being yellow and the front legs brown. I had encountered this fly before and should have known when I saw the nymphal shucks on the rocks earlier in the day that they would appear again that night. The nymph of this fly does not rise to the surface as is the case with the Shad fly, but crawls out onto a convenient rock or log, where it leaves its telltale nymphal case. I had only left this pool a minute when another fisherman stepped up, cast a wet fly to the spot where Old Goliath lay and hooked him.

After a few surface explosions he was again free, back under his log, probably brooding over his error. Later I asked the fellow what pattern fly he used and he told me it was a Leadwing Coachman. Incidentally, this is a very good wet fly when the Bi-colors are emerging.

During these heavy hatches one can learn a great deal about the various insects and their behavior but we also find that fish are not always easy to deceive at such times.

That evening, as we walked to the Project office, the air was filled with insects. We scooped some of them into our hat and found that in addition to the flies above mentioned there were some Evening Duns and Beaverkills with their yellow egg masses. Possibly the son knew something when he fished the yellow tagged fly in preference to the large drake.

William Burke, deputy game protector of Girardville, fishing fly last season on a pet section of Penn's Creek, Centre County.

The flies in the accompanying illustration represent for the most part various types of flies imitating the Shad fly, and the remainder are typical flies encountered during Shad hatches.

No. 1. The Fan Wing, extended body fly represents the Shad fly closely.

No. 2. The Fan Wing, tied on a No. 10 long shank hook.

Nos. 3 and 4. The divided wing fly, showing front and side views. This fly will take more punishment than any type of fan wing.

No. 5. The Green Drake wet fly sometimes produces good results before the fish have started surface feeding on the Sub-imagos. Most manufacturers make the body of this fly too yellow. A deep cream color or pale yellow is preferable.

No. 6. The Shad Fly nymph tied with cream color fur body, peacock setae and brown hackle.

No. 7. The black drake spent wing; body white; wings, dark gray approaching black; hackle, yellow badger.

No. 8. The Pom-Pom hackle fly I tied for Billy Ibberson on which he took several large trout. This fly was tied of pale yellow hackle, oversize on a No. 4 hook.

No. 9. A very good pattern of bi-visible for use when the trout are interested in Shad flies. The body is pale yellow silk with the same color hackle tied sparsely over it and a Greenish yellow hackle tied heavier at the front.

No. 10. A light Cahill will often take trout when feeding on Shad flies. This should be a large fly of sizes 8 or 10.

No. 11. This fly designed by "the kid" will take trout through the entire season. It is tied of brown silk with yellow chenille egg sac and brown hackle, sizes 14 and 16. He calls it the "Brown Bomber" and he sure has scored some K.O.'s with it.

No. 12. The Caddis fly or Shad fly as Rhead called it and No. 13 the imitation tied wet. Body, finely cut and mixed black and brown wool spun onto a piece of thread; Tagor Egg sac, green; wings, bittern feathers; legs, dark brown.

No. 14. The leadwing coachman; tail, brown; body, peacock herl; wings, blue heron and hackle, light ginger.

CORRECTION

Edgar W. Nicholson, member of the Board of Fish Commissioners, calls attention to the following error which appeared in a recent issue of the ANGER relative to trout fishing in the Wissahickon Creek in Philadelphia. "The section of Wissahickon Creek in Fairmount Park, from Germantown Avenue down to Walnut Lane Bridge is the area where nothing but fly fishing is permitted, (no spinners allowed)."

Conneaut Lake fishermen are still discussing the finding of a giant muskellunge in that famous fishing spot last year. The muskie, 54 inches in length, 23 inches in girth and tipping the scales at 42½ pounds was found floating, not a mark on it, by Mr. Freeland, who has a cottage at the lake, according to W. A. Jackson of Conneaut Lake.

TOMORROW'S GAME FISH

(Continued from Page 11)

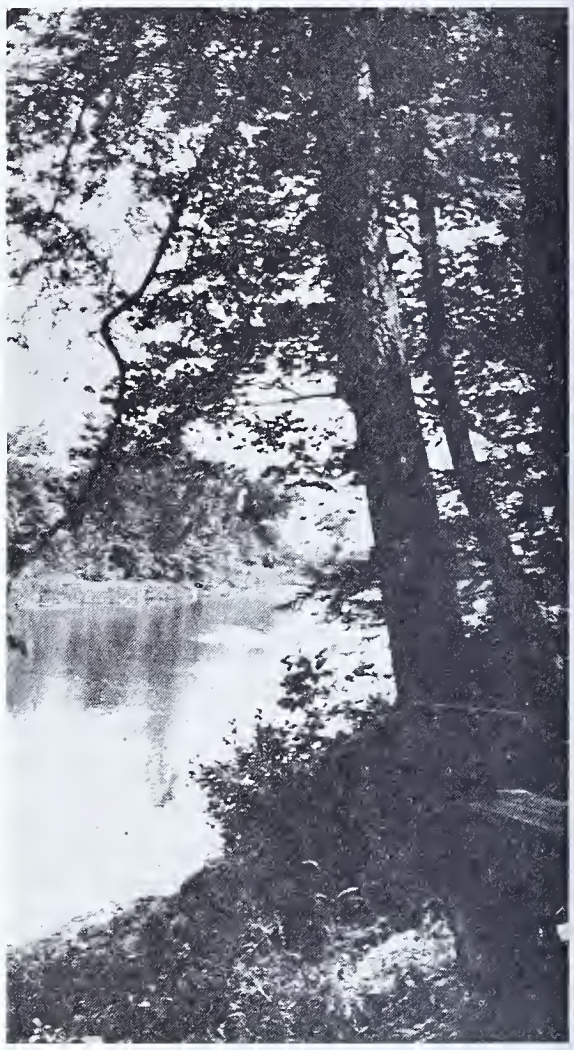
abundance of forage suitable for bass and pickerel as outstanding. It goes without saying, incidentally, that the pickerel, owing to the voracity with which it preys on other fish life, is to be regarded as a most undesirable fish in trout waters. Drought conditions, reducing the stream flow, and cutting of the timber on the watershed has resulted in the past twelve years in a slow but steady rise in temperature, until, in Section "A", an extreme summer water temperature of 76 degrees has been recorded. This alone, however, it is believed, could not account for the presence of the bass and pickerel and scarcity of brook trout. The tendency of the adult charr to move into lower waters after spawning in autumn, remain there until water temperature rises in summer and then seek cooler stream areas or spring tributaries is well known. Willow Run is now classified for brown trout stocking and it will be interesting to note results from this planting.

Both the bass and pickerel are fish that apparently adapt themselves quickly to prevailing conditions in our streams. Perhaps no more conclusive proof for this fact is needed than reference to the amazing rapidity with which the smallmouth bass increased in number when first stocked in streams in Pennsylvania east of the Alleghenies. There seems some reason to believe that where suitable forage conditions obtain, both bass and pickerel will readily make themselves at home in streams carrying fairly low water temperature. Certainly this was the case in Willow Run.

It would be foolhardy to say that because "this or that" condition prevails on a certain water, all other low temperature waters are similarly affected. The record shows, however, that on Penn's Creek in Union County, smallmouth bass and brown trout are being taken from the same stream sections, and that on Big Pine Creek in the North Tier, the bass movement has progressed steadily toward the upper reaches of the watershed in recent years. If any conclusion is to be formed, it is that the bass, smallmouth and largemouth, but more particularly the smallmouth in the instance of trout waters, is the most versatile of all our game fishes. If it encroaches on trout waters of its own accord and establishes itself in them, there is all the more reason to think that it is the game fish of tomorrow. Under the present system of stream stocking in Pennsylvania, bass of both species today are being planted in major warm water streams and lakes offering wide range generally. Trout streams likewise are rigorously classified for stocking with brook trout, brown trout or rainbow trout. This may be regarded as a precautionary measure whereby the planting of species of fish life regarded as deleterious to certain waters is checked to the greatest possible extent in the stocking program.

Nature, however, must offer the final solution in this problem of the range of the various species of game fishes. Present day signs would indicate that her balance has turned in favor of the hardy and aggressive bass. The fact remains (with due deference to the trout fisherman) that in this truly American game fish the angler of tomorrow will find no dearth of sporting possibilities.

The fellow who gets fed up with routine fishing and who looks for a new thrill should try angling with a fly from which the hook barb has been removed. A tight line is absolutely necessary, for the slightest slack will enable the fish to shake loose. With no barb to gouge deep into the jaw of the fish, it is easier, also, to release the small ones.



In some sections of Penn's Creek, brown trout and smallmouth bass are taken in the same water.

The smallmouth bass, hardy and aggressive, finds ideal environment in many or our ledgy and rock bottom streams.

NARY A SPINNER

(Continued from Page 12)

goat beard, on the lower side and right at the head of the fly. This tuft of red seems to serve a dual purpose; the color is no doubt intended to excite the bass and the manner in which it is affixed seems to cause the fly to dive.

Royal Coachman: An old, age-mellowed favorite and still one of the best. This streamer is tied in many variations as to hook, over-all size and material. With body tied in the orthodox pattern, hackle brown, the white streamer portion may be composed of feathers or bucktail. Your correspondent leans strongly to an all-feather fly offered by a mid-west producer, and it is by far the bulkiest lure he uses. The hook is 2¼ inches in length, and there are six white feathers streaming back from the brown head, three ranging on each side of the barbed sliver of steel. This fly has an approximate over-all length of 3¼ inches.

King Coachman: A hybrid developed from Royal Coachman parentage and now produced in large quantities by a young Dauphin County couple. The fly, named locally at least for the writer, was first tied hereabouts for his personal use. It follows the same general physical outline as the distinguished ancestor with the exception that there are only four white feathers, the other two being brown. The two brown feathers are affixed in such a manner as to ride over the white, producing in effect a brown-backed, white belly animal, bug, minnow or what-not. The variation from the origi-

nal was discovered quite by accident in Sherman's Creek some years ago. Before stepping into the water, a new Royal Coachman streamer was tied to the leader. After a few casts, the fly proved defective and a portion of the brown hackle head unwound and streamed back over top of the white. This brown-back, white-belly cripple became an instant killer; in quick succession a startling number of bass felt the sting of its barb. A lucky lure and still luckier bass; the former is now retired in honored moth-ball seclusion, the latter were all carefully released and returned unharmed to the water.

For the fellow who wants to put his bass fly fishing on a par with the easy smooth pleasure of trout casting, the above type flies are likely to prove an agreeable surprise. Emphatically these flies work more successfully without the spinner and its abominable casting handicap. Lighter rod, lighter line, lighter tapered leader, working only fast rapids and eddies, this dub found the 1939 season by far the best in many years, and to top it off at least a half dozen of the bass were larger than any taken before on the dancing bamboo. And there wasn't a spinner in the box.

As a last word of caution and to avoid possible misunderstanding, this fisherman does not advocate the elimination of flash. On the contrary, he considers flash most essential at times—*but not at the expense of action.* He likes his fly to dart about with ghostly, dodging indecision; practically impossible with the dragging weight of spinners. We want our flash on the hook, gold or silver wire or tinsel wrapping—a deadly combination of both glitter and action.

Some may question the tapered leader. Properly tapered terminal tackle helps to take up the "slap". And sometimes, depending somewhat upon water and weather conditions, slap is mighty important even to so aggressive an old raider as *Micropterus dolomieu.*

A MAD-TOM HAIR MINNOW AND FLY TYING GOSSIP

(Continued from Page 3)

There is, however, such a thing as a colorfast chenille and I have some now that is very satisfactory. Much of the ordinary embroidery chenille sold by dealers in fly materials is not of this kind and therefore a delusion and a snare. In chenille of real quality the fuzz or filling should stand stiffly away from the stem like the bristles on a bottle brush or the tail of an angry tom cat. But even this is by no means an unfailing index, and the safe way is to purchase small samples first and place them in a glass of clear water overnight. If the color is going to do a Paavo Nurmi this will be shown in the water next morning. In any event chenille that has a velvety soft nap should be deeply distrusted. The dark colors seem to be the least permanent but some of the scarlet chenilles quickly fade to a pale pink.

A Mad-Tom Hair Minnow

No fly-rod lure has been more effective at the end of my leader, for the black basses than the streamer fly and its variant, the hair minnow. Some versions of the latter have proven quite deadly for large-mouth under several conditions and in different waters.

It is of course well known that one of the most killing natural baits for bass in the northern states is that poisonous little devil the stone-cat or mad-tom of our countryside streams. Now, although, I foreswore years agone, the torture of dragging a bait bucket over the rocks, I am free to acknowledge that the various and small fish including the mad-tom are seductive beyond tell, for the bass family.

So, at the suggestion of my young fishing pal, "Mocka" Belt, last summer I concocted a hair and feather counterfeit of the latter which proved its worth in several fishing bouts. In view of this it seemed that this might interest the readers of the PENNSYLVANIA ANGLER.

This lure is tied on a size one, model perfect, standard length hook, having a hump in the shank, as illustrated in figure 5. Although the use of the hump shank usually is now necessary in the construction of ordinary hair minnows, owing to the wide, flat head carried by this one (Figs. 5 & 6) its use seemed advisable to prevent possible body twist.

Although hooks are available both with single and double humps, the standard length shank having a single hump on its upper side is much to be preferred for this purpose. Hooks having the hump underneath the shank are not suitable for lures having a moderately thick body because this serves to reduce the necessary clearance between shank and barb. In fact it is difficult to understand what, if any, advantage there may be in placing the hump under the shank.

The first operation in construction is to attach a cylindrical lump of plastic wood on the hump and around the shank as shown in figure 5. When this has set hard it is shaped by knife and sandpaper into the form indicated in the figure last mentioned. This shape provides a secure seat for the bunches of hair that will form the body.

Three bunches of hair, each of different color, are supplied. The first is that representing the belly of the fish and is white in color. It is both cemented and tied fast, and the cement used is the ordinary household kind procurable at the versatile "5 and 10". Such cement consists essentially of celluloid dissolved either in acetone or similar solvent and is contained in collapsible metal tubes. Hair suitable for the belly may be of impali tail, capra or deer hair but should be sufficiently soft to allow considerable movement when finished. It should be about 2½ inches long which will allow it to extend at least an inch beyond the bend. It is unnecessary in this type of lure to observe the same proportions of body to hook as is the case with ordinary streamer flies because experience has shown that the fish ordinarily strikes at the head of the hair minnow. A large drop of cement is first placed on the plastic, and the butt of the hair bunch is also dipped in this cement. The hair is then tied with several turns of the silk underneath the plastic anchor. The next layer of hair consisting of olive green impali hair, is applied in the same manner but on top of the plastic and shank. This is in turn topped off with a somewhat more slender layer of black hair. Any long flexible hair will do for this but I used the tip hair from a jackal tail that happened to be at hand. Black deer tail will do provided it is not too stiff. At this stage the body should look somewhat like figure 7. The lateral line of the fish is represented by a narrow, list hackle from the neck of a game cock, and one of these is applied on each side as shown in fiure . Lastly the feather representing the dorsal fin of the mad-tom is tied in and the head may then be constructed. This is accomplished by applying plastic wood right over the original anchorage of the body hair and the hump in the shank. The material is applied in excess and roughly modelled with the dampened fingers while still soft. The general shape and protections of the head are shown in the figures 7 & 8 and no difficulty should be experienced in approximating this. After the head has thoroughly hardened which should be about 6 hours if placed in a warm room, it may be finished by the use of a sharp blade, file and sandpaper and the eyes may then be painted on or inserted. Glass eyes, which are much to be preferred, come in pairs attached to a length of soft iron wire and then before insertion they are cut off, leaving a little of the wire on the eye to assist in holding it when cemented in place. Such eyes are sold by all dealers in taxidermists' supplies and cost very little. They add greatly to the effectiveness of such lures as this. They may be inserted by boring a hole a little larger than the eye. This is then filled with plastic wood and the eye is simply pressed into place in it. Any excess of the plastic, exuding from the eye socket, may be afterward easily removed with a sharp small blade.

The upper part of the head is painted a dark olive green but the throat and lower lips are given a coat of good white enamel paint. Artists tube paints mixed in spar varnish are suitable for this purpose but in this case, a finishing coat of thin spar varnish should be applied last, for durability.

The barbels are represented by inserting lengths of stripped peacock herl such as is used in tying quill bodied dry or wet flies. When finished, this lure should resemble figure 8 and is fished like any other lure of similar construction. I usually place it behind a brass or gold spinner of good size so that it sinks well below the surface.

MARKER FOR DOM AT GREENAWALT RESERVOIR

In accordance with a resolution passed by the Westmoreland County Sportsmen, Greenawalt Reservoir will be known as "*Dom's Reservoir*" in memory of W. M. Dom who passed away during the winter. Mr. Dom was one of the outstanding sportsmen of Western Pennsylvania, and had done much for fishing in his county. Under the resolution, it is understood, a suitable marker of stone is to be erected, funds for which have already been solicited by the Westmoreland County Sportsmen.

Cedar Creek in Lehigh County produced two of the biggest brown trout reported, each 24 inches in length. Jack Hauser of Bethlehem caught one and Carl Bernhard of Allentown the other.

HERE AND THERE IN ANGLERDOM

Don't let anybody kid you about it, a really expert worm fisherman ranks as one of the deadliest takers of trout ever to fish a stream. And, according to Special Warden Tommy O'Toole of Wilkes-Barre, Mathew Zeadolick of Wilkes-Barre Township is just that. He fishes worm from the start to the end of the trout season and takes some mighty big trout even when the water is low and clear. One of the secrets of his success with the worm is the use of fine leaders, many of them tapered to 3x point, which he ties himself.

Clyde Fox, Jr., son of Clyde Fox, genial and active secretary of the Harrisburg Hunters' and Anglers' Association, is an ardent conservationist. Last year, according to Special Warden Maurice Kanneg, Clyde caught a small rock bass, found that it had swallowed the hook and immediately, with great care, cut the snell and left the fish go. Ardent juvenile anglers, Kanneg reports, are "the Dukes, Juniors" of Harrisburg. Recently they caught a number of suckers ranging in length from 10 to 15 inches. Good catches of suckers and catfish, he reports, have been made recently in the Conodoguinet Creek.

Included in the catches scored on opening day of the trout season in Stoney Creek, Dauphin County, were several exceptionally fine brook trout taken by Harrisburg anglers, reports Warden Frank Sanda of Steelton. Harry Towloumes scored with a 14 inch brookie, the rest of his catch ranging upward in size from 8 inches. Albert Hoy, in addition to a creel of brookies ranging from 7½ to 12 inches in length, caught three fallfish, from 10 to 12 inches in length. J. G. Heck's creel of brookies ranged in length from 8 to 12 inches and James A. Kline had a catch of brookies from 8 to 11 inches in length.

And then there was that fine catch scored in Spring Creek, Centre County, by Tom Forsythe of Harrisburg, one of the best trout fishermen ever to whip out a nifty cast. Tom's catch included several 16 inch brown and rainbow trout and was topped by a heavy girthed rainbow measuring 20 inches in length.

Heavy catches of suckers were made below the Carlisle Waterhouse Dam on the Conodoguinet Creek early in April, according to Warden George James of Carlisle. One hundred and fifty suckers were caught.

Writes Philip Ball of Sayre: "One day last August I had quite an unusual experience while fly fishing for bass during the evening hours in the Susquehanna River near here. I just got two strikes that evening and caught two smallmouths, one 16 inches and the other 17 inches. Both put up a good battle and I played them very carefully. Now, I really mean carefully, because, when I had landed them with my net, I found that neither one of these bass was hooked in the mouth. The 16 incher was hooked on the outside of his lower jaw by a small portion of skin and the 17 incher was hooked below the left eye, also by a bit of skin. Had I handled these bass roughly and carelessly they no doubt would have got away. In addition to being hooked unusually, these two bass were the largest ones that I caught during the 1939 season. The biggest bass was mounted by myself and it certainly is a fine trophy among some of my other mounted specimens. The good fly that evening was a Grizzly King Streamer with a small spinner".

Tom Forsythe, expert bucktail fisherman, of Harrisburg, took this brown trout, 22½ inches in length and weighing 4½ pounds, in Spring Creek project last year.

Word comes from Don Blair, secretary of the Venango Rod and Gun Club, that the field day of the club, one of the outstanding outdoor events in northwestern Pennsylvania, will be staged this year on Saturday, September 7.

Controlling the watersnake on their pet fishing streams last summer was a hobby with Owen Faulk and Joe Wright of Harrisburg last year, according to Special Warden Maurice Kanneg. Their kill of snakes on Clarks Valley Creek one day last June numbered 23, and when opened, a number were found to contain trout ranging in size to 6½ inches. Kanneg also reports that Ed Hartzell of Linglestown while fishing at Union Deposit on the Swatara Creek on March 17 caught seven suckers having a combined weight of 14½ pounds.

Writes Larue Zeisloft of Bloomsburg, R.D. 1: "I have taken the Angler for the past year and have enjoyed the articles that have been in it. I notice that people send in their nice catches of fish and have them entered in the magazine. Might just as well send in the following dope on one of my catches. While fishing Big Fishing Creek in Columbia County about the middle of July, I caught a very nice brown trout. It measured 22¾ inches in length and weighed 3 pounds 6 ounces. This fish was taken on a Coachman fly and spinner combination and was the second largest trout reported caught in Columbia County last year, according to records of a contest conducted by Finks Sporting Goods Store in Bloomsburg. Unfortunately, the contest ended on June 30, hence it was not eligible for one of the prizes".

Writes Warden George Cross of Hammersley Fork: "Just received some information on the taking of a big brown trout that I thought you might be able to use. The trout was 26 inches long and it had tried to swallow a pickerel 14 inches in length. As a result, the old brownie died before he finished the job. He had the pickerel better than halfway down, at that, and it was partially digested. This fish was found by Warren Bauman, president of the Mill Hall Manufacturing Company and was turned over to me by the secretary and treasurer of the company who is one of the active directors of the Clinton County Fish and Game Association.

"CAMPING"

by

A. G. SHIMMEL

BESIDE a bubbling mountain stream,
Where stately paper-birches sway
To every vagrant breath of air,
We pitched our tent again today.

And now that night, its shades has spread:..
It's good to sit here in the light,
And smell wood-smoke and see the flames
Burn shining holes into the night.

It's good to be back here again
Away from cities lights and sounds,
And hear the voices of the night
As Mother Nature makes her rounds.

Consider the Other Fellow:
He Likes His Trouting, Too!
Take a Sportsman's Creel.

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Vol. 9. No. 6

PENNSYLVANIA ANGLER

JUNE 1940

EDITORIAL

THE BASS PROGRAM

THE program of your Fish Commission is based on the thought of keeping pace with the ever-growing number of fishermen, and the plan set up in 1939 provided for the stocking of much larger fish in the majority of our bass waters. It is our belief that in time we will be able to stock bass up to legal size. Under our present set-up, it would be possible for us to stock several million bass each year, but they would be very small. We are not interested in number but are tremendously interested in the task of making Pennsylvania one of the best bass fishing States. We believe by stocking less fry and devoting our efforts to raising these fish to much larger size, we can complete our program much sooner.

We have experienced many difficulties before arriving at a suitable program for the propagation of bass, but believe we now have a unique system which will be the final solution of this problem.

The survey of the fishing waters of the State has shown that while most of the major streams and upper waters of our various rivers are only suitable for smallmouthed black bass, there are many areas where the largemouthed predominates. Both species will be raised and planted.

Our mammoth bass farm at the Huntsdale Hatchery will be in operation for the first time this year, and I sincerely wish every fisherman in this Commonwealth could spend some time at this wonderful bass farm, if possible, and see just what we are doing.

Don't forget the slogan—"Lose a Hook and Spare a Bass." All fishermen can play a vital part in conserving bass by sacrificing a hook.

C. A. French
Commissioner of Fisheries

Fly Rod Technique and Spinners for Bass

By Wm. R. Walton

FOR some inexplicable reason many anglers, who handle the casting rod with facility, hesitate to attempt the fly rod technique as being too difficult to acquire. They apparently labor under the erroneous impression that ordinary casting with the fly rod is a much more difficult game than bait casting. My personal belief is that the contrary is the truth and that anyone who has really mastered casting rod technique may easily acquire satisfactory skill with the fly rod.

It is of course true that the casting of right and left hand loops in the fly game is quite another thing but this is the most difficult branch of fly fishing and one may use the fly rod with satisfaction and profit for years without being called upon to handle a dry fly. The fact is that dry fly fishing for bass can be practiced with success only rarely and under unusual conditions.

Fly rod technique does, however, differ from that of the casting rod in that it requires somewhat greater facility in the use of the left hand or rather more complete or team work coordination in the use of the hands.

Among the easier of fly rod acquirements is the successful casting of the heavier lures such as bugs, hair-minnows and streamer flies, especially when the latter are attached to a small spinner. This acts as ballast during the back cast carrying the end of the line backward readily and thus enabling the neophyte to begin his cast forward under the most favorable conditions. If the heavy lure makes a splash in contacting the surface, no harm is done, as this is more likely to attract Mr. Bronzeback than to frighten him.

Practically the whole secret of fly rod manipulation resides in the full utilization of the resilience of the rod. This in turn depends importantly on the fitting of the rod with a line abundantly heavy for the particular rod to be used.

It may be stated as an invariable rule that any fly rod, sturdy enough to stand up under the strain of bug and hair-minnow casting, never should carry a line smaller in diameter than size C or D, and usually the larger size is better.

The bait caster will have learned that the lighter the casting line, the easier it is to control, but in fly rod casting, exactly the reverse is true. Except with the heavier fly rod lures, it is the line and not the fly that is cast and this must be heavy enough to pull the rod tip well back of the butt during the back cast if the full power of the rod is to be developed. The line should be heavy enough so that with about 40 feet of it out, and without fly or leader attached, it can easily be cast full length in the absence of wind.

Keeping the foregoing in mind it is my advice to the beginner to wade into some suitable large stream or pond and go ahead and cast, as that is the way to learn the game.

Let the backcast go as far as it will before starting the forward cast, *use your elbow* and *wrist only* in this, and success is sure to come. Don't let some high pressure salesman sell you a tapered line for this game either, and a 5 foot 10 pound test, synthetic gut leader is perfectly O.K. for this purpose.

A long light leader is required for some kinds of bug casting but that can come later after the rudiments have been acquired.

After the timing of the forward cast has become automatic, the stripping in of the line, to retrieve the lure, is the next step to be acquired. The numerous volumes of directions for fly fishermen illustrate this action by depicting the line held in the left hand in beautiful, orderly loops but the truth is that nine out of ten fly rod fans just let the slack fall into the water beside them. This is satisfactory procedure *provided* that you *do not step* on the line or into the loops. In the former case the line may be ruined, and in the latter if a fish happens to strike you will have to do the split, or something, while playing him.

While stripping in the line with the left hand, it is well to control it with the right fingers during the interval while the left hand is reaching forward for another fistfull. If a fish strikes just at that moment, he may fail to hang and if he does you will be doing some amusing acrobatics in trying to keep a tight line, which is the secret of landing them with a fly rod.

In the manipulation of spinners attached to hair-minnows, and streamers, it frequently becomes desirable to retrieve these slowly and steadily without moving the tip of the rod at all. This objective is attained by the use of what that most sapient and clever of angling writers, Ray Bergman, calls the "hand twist retrieve".

This trick probably is as ancient as the art of fly fishing itself but is difficult to describe without the aid of illustrations, so with this in mind I have made a set of drawings which should serve to supplement the following description:

After the cast is made and with the line fully extended, the rod being held at about the angle illustrated in Fig. 8, the left hand with its thumb pointing toward the body, grasps the line as shown in Fig. 1, and is brought forward and downward by turning the wrist, thus retrieving several inches of line, Fig. 2. Then without relinquishing the line, the forefinger and thumb are extended, Fig. 3, grasping the line, Fig. 4. The hand is then moved in reserve, upward and backward as far as the wrist will take it, Fig. 5, again retrieving more line. As the hand reaches the limit of its backward path, but with the line retained between thumb and finger, Fig. 6, the remaining fingers are opened and the outer edge of the hand engages the line about at the second joint of the little finger, Fig. 7. This completes the cycle which is repeated until the lure is in position to be lifted for another cast.

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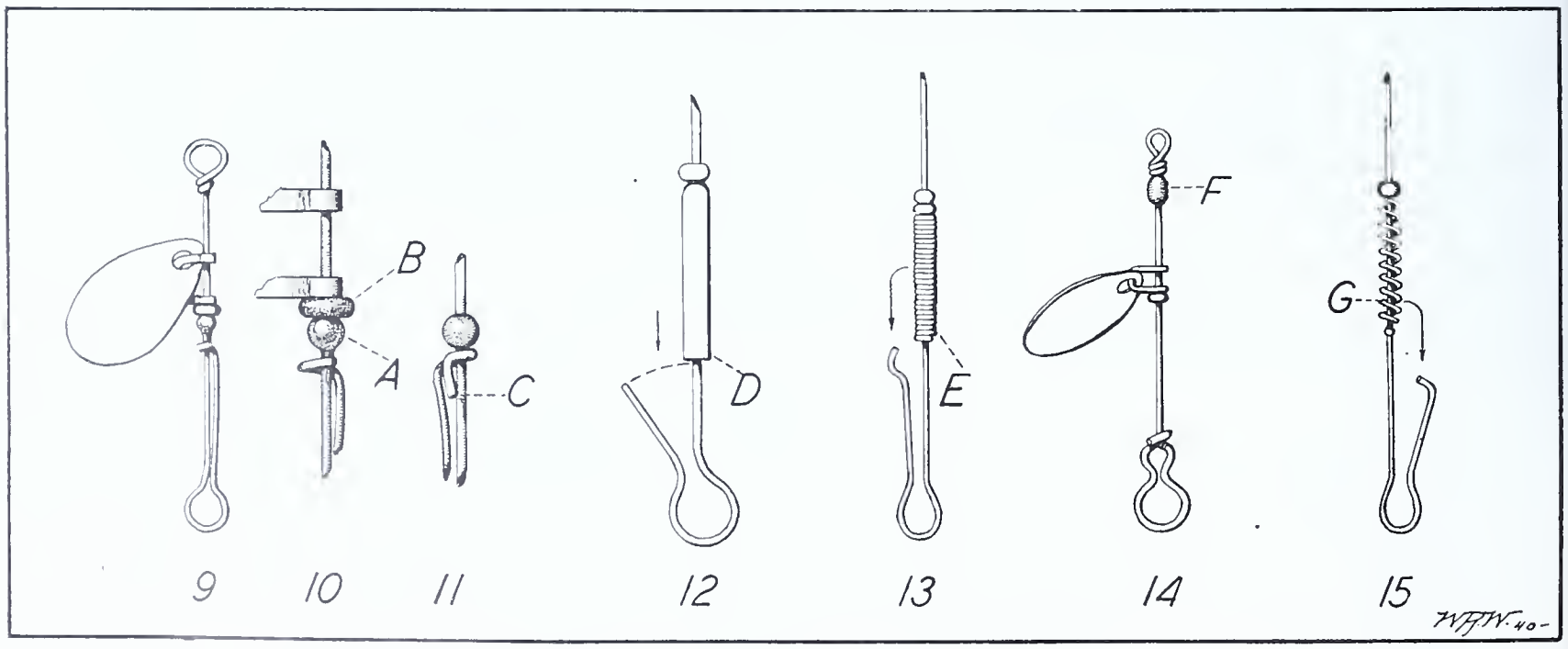

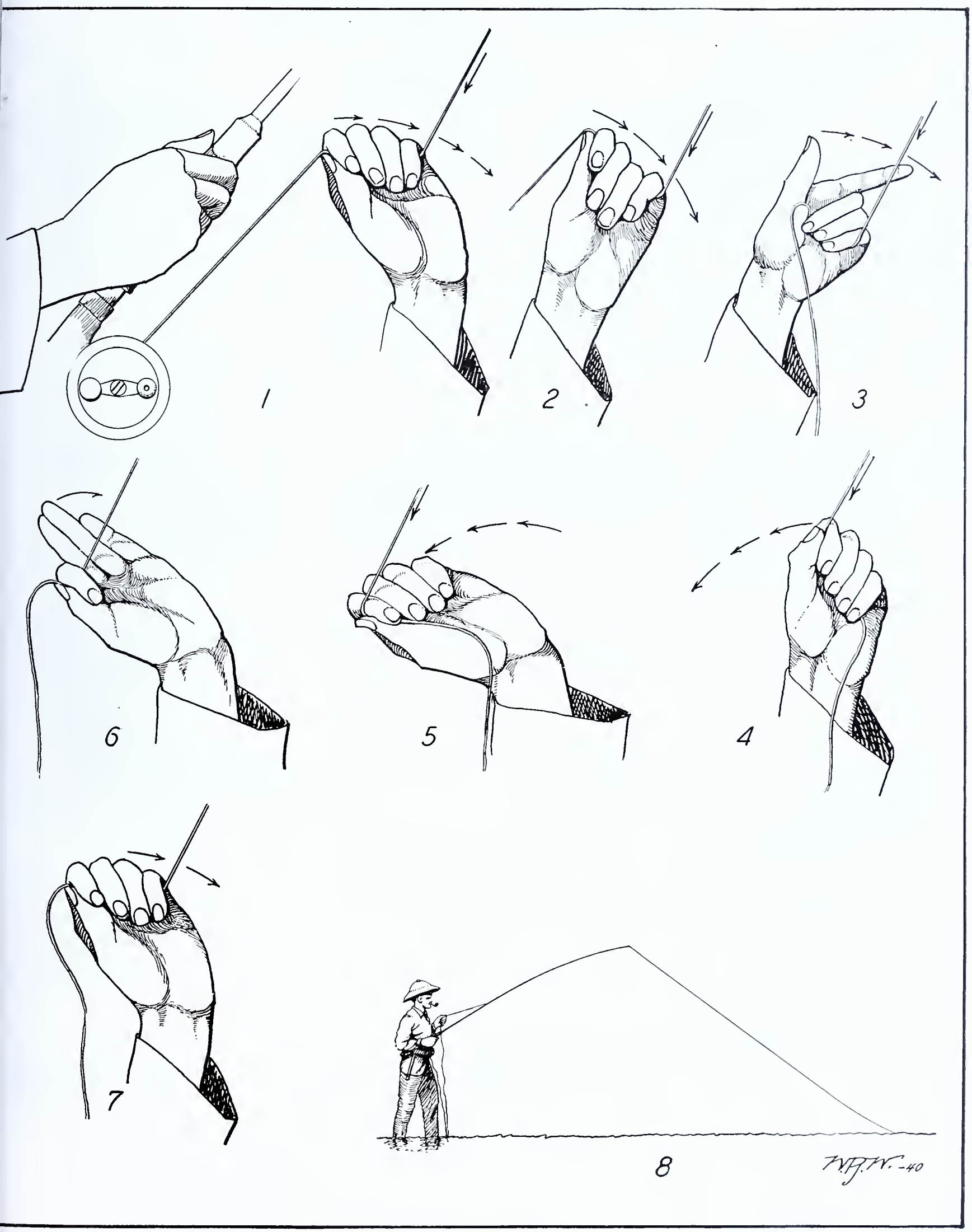
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BASS LURES

By CHAS. M. WETZEL

OF the hundreds of bass lures on the market, very few bear any close resemblance to the natural food of the fish. This in itself may seem queer, yet the majority of these lures have something, that at first glance, arouses more of a spirit of combativeness in the bass, than an appeal to its hunger. That something is ACTION, and if a lure possesses this quality, then it should prove successful.

Bass, in their natural and normal state, simply will not take a dead bait, unless forced to it by extreme hunger—a situation seldom encountered. What they want is something alive—something which they can kill before eating; and man, knowing how inherently strong this killing instinct was developed, set about and devised lures with action.

By action, I mean the tantalizing or aggravating effect produced by the lure as it is being retrieved through the water. This may be achieved by a clever manipulation of the rod—probably enhanced by a study of the natural food of the bass, especially when using such imitations,—but in perhaps the majority of cases, it depends solely on the lure, and the manner in which it is constructed. By this I mean the various plates, projections, fluttings, propellors, hollowed out portions, joints, curved surfaces, etc., which either cause the lure to move erratically through the water, or create some effect which proves irresistible to bass. In short, to be successful, the lure must move, simulating the effect of something alive, and of something attempting to escape. Now as I have mentioned, all the successful lures possess this attribute, and roughly they may be divided into two groups, i. e., those which imitate the natural food of the bass; and those which by their action—coupled perhaps with some quality we know nothing about—arouse the fury of the fish, and goad him into striking. Before proceeding further, it might be well to briefly review the principal food of the bass, which might prove helpful in the methods of manipulating the various lures later on.

Listed in their order of importance, particularly emphasizing preference, the writer would suggest the following list for the two species:

Smallmouth Bass—Crayfish, stone catfish, helgramites, dragon fly nymphs, minnows, fish fly larva, stone fly nymphs, frogs, Dobson flies, dragon flies, stone flies, fish flies.

Largemouth Bass—Crayfish, minnows, frogs, dragon fly nymphs, Dobson flies, dragon flies, fish flies, stone flies, fish fly larva, stone catfish (streams), helgramites (streams), stone fly nymphs.

The above groups are typical of stream and lake conditions in Pennsylvania, where in general, all of the fish, insects, frogs and crayfish listed above are found.

A striking dissimilarity in the feeding habits of the two species will be noticed, that is, the decided preference for surface feeding among the largemouths. This is not governed by stream conditions, but is typical of Canada, and the Southern States; and is more pronounced the farther south one goes. In Delaware, where the largemouth predominates, I would say that nine out of every ten bass, are taken on surface lures. In Pennsylvania, where the smallmouth reigns supreme, we have a different picture. Here the underwater type of rule proves most efficacious. Both species of fish, however, feed underwater and on the surface, but their preference for foraging grounds are diametrically opposite; the smallmouth loves swift deep water with large boulders on the stream bed; while the largemouth prefers to lurk around a muddy bottom, especially among lily pads in slow moving shallow waters. And now to a description of some lures that have proven successful.

Fly Rod Surface Lures

One of the best of the deer hair lures is the frog, Fig. 1. In a former issue of the ANGLER, I have described the method of tying it and the manner in which it should be manipulated on the surface of the water.

Briefly recapitulated here, the method of fishing it is as follows. First grease the frog and the line thoroughly, using care that none of it adheres to the leader. Ordinary line dressing will prove satisfactory for both operations.

The lure is then cast out on the water and allowed to remain motionless for a few seconds before any artificial impetus is imparted. Now reach forward with the left hand, strip in line until it is taut, and then by a twitching motion of the rod, make the lure move slightly on the surface. Pause and repeat each operation until the frog is finally retrieved. In seizing the lure, quite often, bass will churn the water into a violent commotion, but in perhaps the majority of cases, it is more or less in the nature of a sucking movement, and the surface agitation will not be so pronounced.

Taking bass on fly rod surface lures represents great sport, and is packed with thrills from start to finish. One of the most important requisites for success is to have the line at all times thoroughly greased, so that it will float lightly on the surface. The interval of time from when a bass strikes a lure, until it rejects it as being unfit for consumption, is comparatively short; and should the line become waterlogged and start settling to the bottom, the inability of one to take up the slack and set the hook in this brief period will become apparent. I would say that nothing is more inimical to success than disregard of this important operation—that of greasing the line thoroughly at frequent intervals. This also applies to the lure, especially those fashioned from deer hair. I have a decided preference for these types, since bass retain them in their mouths for a considerably longer period of time. Of this group, the hair frog is one of the most successful, and it can be well recommended as an excellent lure when bass are feeding on the surface.

"Bill" Moore, one of Delaware's ace bass fishermen has a decided preference for the white cork bug illustrated in Fig. 2. This lure floats lightly on the surface, is visible for a great distance, and proves particularly appealing to largemouths. Bill swears by it, and since he has a number of prize winning fish to his credit, his views are not to be taken lightly.

A recent innovation within the past few years is the bug illustrated in Fig. 3. The body has a lustrous satin sheen, and though it is made of cork, the surface material resembles cellophane. I have used it with marked success, and it is without doubt, an excellent top water lure.

Fly Rod Underwater Lures

In Pennsylvania waters the majority of bass are caught on underwater lures, and for the fly rod enthusiast, the fly and spinner combination will prove most successful.

This type of lure works best on cloudy days, early mornings, and late evenings—particularly the latter. I have used it with marked success at night, and some of the largest bass I have ever taken were caught at this time. For lures adaptable to the fly rod, and for Pennsylvania waters, the fly and spinner combination will prove more satisfactory than probably any other type. It is particularly successful in rocky streams where the water is not over five feet in depth.

The type of fly to be used is a matter of individual choice. I have a strong preference for those of a rather gaudy color, and my favorites are the Parmachene Belle, No. 5 Edson Dark Tiger Bucktail, No. 6 Royal Coachman, No. 7 Red Ibis, Silver Doctor, Black Gnat and White Miller, all tied on No. 1, and No. 1-0, straight ringed hooks. The two bladed spinner is undoubtedly the most popular, and for the sizes of flies given above, the blades should be about the size of one's thumb nail. All spinners are equipped with a fastening device which permits easy attachment to the fly. Fig. 4 drawn to full scale illustrates the gadget.

The method of retrieving it through the water is accomplished in various ways. I sometimes use a steady continuous pull, retrieving the lure at a pace which keeps the spinner blades continually revolving; then again I work it in a series of alternate jerks and pauses. Everyone has his own way, and the methods outlined above are merely suggestions for those who have never used this type of lure.

Surface Plugs

The Popping bait illustrated in Fig. 8, is an excellent all round lure plug for use in shallow water. The Pointer or Plunker, Fig. 10, is another which will give good results. This latter plug has a cupped or hollowed out portion at the head and it is manipulated on the surface of the water by means of short jerks, each of which creates a plunking or popping sound that attracts bass to the vicinity. Between jerks the plug should be left lying motionless on top of the water. Remarkable success has been obtained with

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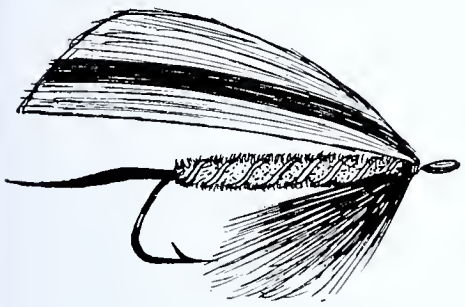

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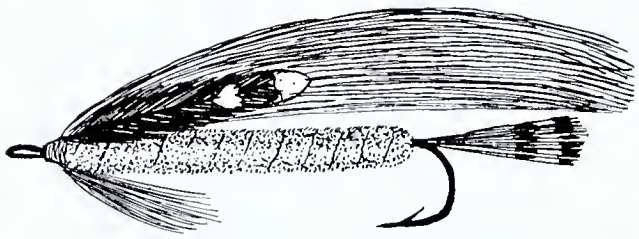

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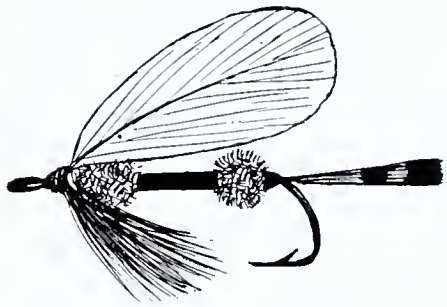

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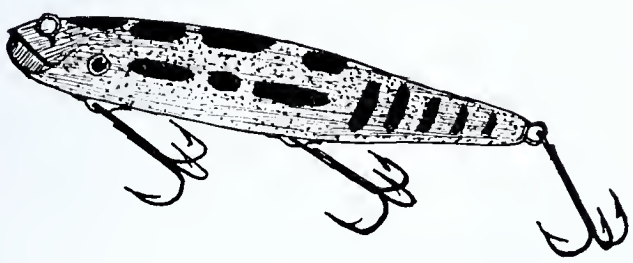

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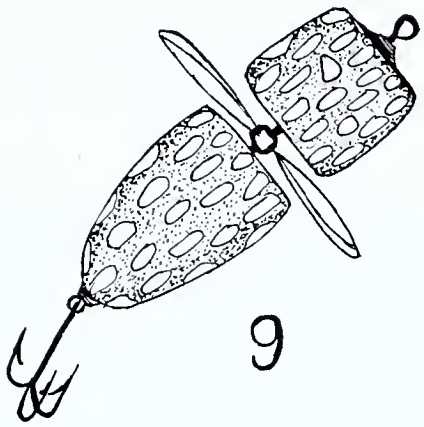

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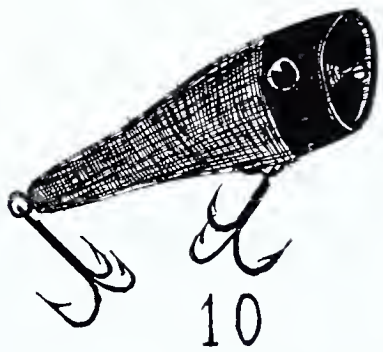

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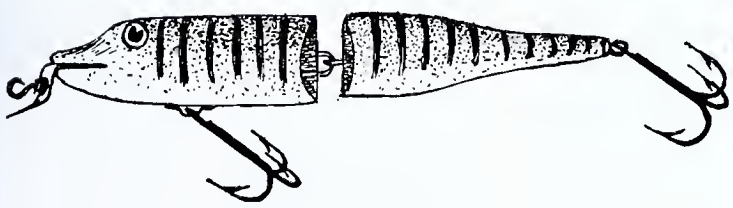

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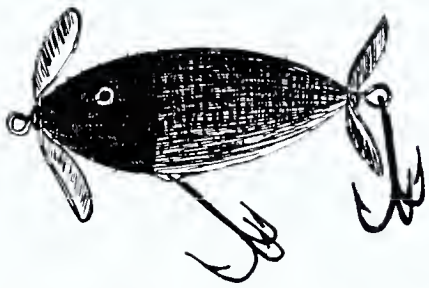

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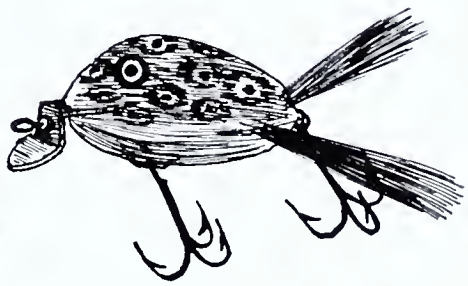

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Wetzel 5-1-40

THE BASS'RE BITIN'

By STEWART PARNELL

THROUGH a door framed by trellised rambler roses, a man sauntered from his home, cast his eyes aloft and surveyed the sky. Two boys, eight and thirteen years of age respectively, followed at his heels, their faces expectant with hope but clouded somewhat by the dread of disappointment. The man thought aloud:

"Sky clear. No clouds to the westward. Air is dry. Doesn't feel like rain. Going to be good weather for several days. Bet the bass're bitin'. 'Specially early in the morning."

With an affirmative nod of his head, the man turned to his waiting audience: "Gentlemen, we go. Call young John. Let's get busy. Must pitch camp by sundown. Maybe fish an hour!"

Doubt and uncertainty ended, the boys, whooping with joy, scattered to assemble fishing and camping equipment. Two hours, crowded with intense activity, ensued. Receiving the glad tidings, John, a neighborhood chum, soon arrived, flushed of face and lugging his duffel bag, nearly equal in size to his eight year old body, but it seemed light as a feather. The man, Dan Burke, an attorney, seemed to find something fine in the brotherhood of sky and stream and rod and line. His two sons, Joe and Gib, had already earned the reputation of inveterate fishermen, hence, their glee resulting from the momentous decision.

Much scurrying about, trips up town, begging overlooked, forgotten articles from Mother, finally ended in a council of war to check over the list set down on soiled, thumb-marked paper in the stubby handwriting of Gib. Additions and subtractions produced the following:

Pancake Flour	Butter
Eggs	Cheese
Crackers	Bread
Meat	Jam
Fishing Worms	Milk
Water	Fishing Equipment
Blankets	Cots
Tent	First Aid Outfit
Snake Bite Outfit	Fruit
Alarm Clock	Hatchet
Gun	Nails
Cookies	Gas Lamp
Dog	Dog Food
Money	Flashlight
Extra Gasoline	Extra Batteries
Clothing	Boots and Shoes
Soap	Towels
Dishpan	Dishes
Saw	Camera
Chewing Gum	Cooking Utensils
Life Savers	Knives and Forks
Gasoline Stove	Minnow Bucket
Spoons	Skillet
Bread Box	Paper Napkins
Paper Dishes	Broom
Paper Cups	Eggs
Fish Scaler	Olives
Oilcloth	Pickles
Potatoes	Mustard
Peanut Butter	Catsup
Films	Oranges
Bacon	Salt and Pepper
Syrup and Sugar	Matches
Coffee	Magazines
Mirror	Camp Chairs
Bible	

"Whew," Dan Burke ejaculated, "it'll take two trips to haul all that stuff. We'll have to hurry. Pile the tent into the car first and then as much of that other gear and equipment as it'll hold, leaving room for yourselves. We'll need all hands to pitch tent."

The ancient vehicle used by the Burke family for hunting and fishing, cherished by them for past services rendered, soon looked like an old-fashioned country flitting, all available space within being completely occupied and sundry articles attached by ropes and straps to the tire rack in the back, along running boards and fenders. The three boys cramped themselves into the car, leaving Dan Burke scant room to operate it. Off they started. Lurching, lumbering grotesquely, the car moved out of town on the concrete highway up past the Devil's Elbow, turned to the left just below Pike's Peak, proceeded through Penn Run about five miles, turned to the right on a typical rocky rut-lined hinterland road, then slithered and bumped for a mile until a bend revealed a medium-size dam nestled amid second growth timber.

Burke guided their mechanical beast of burden past the face of the dam. Rumbling over a small bridge, they turned to the left along the east shore, stopping in a grove of pine trees on a point which jutted slightly into the dam.

"Everybody out and busy," Burke ordered. "This is Laurel Run dam. Tell you more about it later. We'll camp here a while and se how we like it. Shake a leg, now. We only have a few hours of daylight to pitch tent and make a second trip back for the rest of the stuff."

Busy as beavers, chattering like bluejays, happy in the great outdoors, Burke and the three boys unloaded the car. With much effort, they pulled and tugged at the tent Perspiration began to ooze. Flies and gnats assembled for the feast. A few knuckles were barked. Finally, the job was done. They hurried to town, returning with the rest of their camping gear plus Burke's black and white and tan-ticked English Setter dog Boz.

The camping party quickly organized with Dan Burke, forty years young, as sergeant Gib Burke, thirteen years old, as corporal John Trainor and Joe Burke, seven and eight years respectively, as privates first class; and Boz, owning four summers, as watchdog Dividing the work, "Sergeant" Burke assigned to each his duties. All turned to and worked feverishly to set up camp before darkness handicapped them.

The ten-by-ten tent held the three cots rather neatly. Two cots were placed together and made up as a double bed, which accommodated the three boys, Dan Burke intending to occupy the third cot. A one foot aisle separated the cots. At the door of the tent, the cots left a space not over twelve inches in width. Therein and under the cots duffel bags, rifle, alarm clock, and sundry other articles were stored. They cached the food supplies in a safe dry place to the rear of tent. Pots, pans, skillet, and wash basin were hung on nails driven into convenient trees. They dipped a pail of drinking water from a nearby spring. Fishing equipment was stuffed into the tent. From its front, a flap or canopy extended, supported by two poles anchored by guy ropes. On a rough table at the camp site, they placed the gasoline stove, protecting it from dew and possible rainfall at night by a piece of oilcloth which served as a tablecloth at mealtime.

Fond recollections center about the camp table.

Who wouldn't be proud of bass like these?

Just at dusk, while Burke prepared supper, the boys gathered wood for a camp fire to ward off evening chill and serve as an incinerator for refuse and garbage. At last, healthily tired, they grouped themselves around the table and devoured copious quantities of bacon, eggs, bread, butter, milk and cheese. Dan Burke washed the dishes while his buddies made the tent shipshape for the night. The tent did not have a center pole, being supported by a bracket device over the center which joined four pipes at the corners of the tent, the overhanging rods providing space for pajamas, shirts, pants, jackets, and the like. They kept one rod clear upon which to hang the gasoline lamp with the help of a piece of heavy wire fashioned in the shape of a figure "S" with end closed to the point of safety but still permitting the lamp to be detached for use elsewhere. The lamp made not only excellent light but also dispelled morning and evening chill and dried out the interior of the tent. Weary, drowsy after a long hard day, they required little urging to tumble into blankets and drift away in the soothing slumber that only the outdoors can give to the accompaniment of water lapping on the shore and murmuring of night creatures.

Strange, how nights in the open differ from those at home! Dusk halts the pursuit of fish or game with rare exceptions. Fading daylight signals the return to camp, refreshment after the day's exertion, an attack upon steaming food, then relaxation and talk and a game of cards, perhaps. In a while, sleep calls and a look at the watch reveals the astonishing fact that the hour is eight or nine instead of midnight as one would expect. Likewise, day begins at dawn, the demands of sleep being satisfied by that time. Generally, the sun, and not the habits of men, governs the day of sportsmen. In truth, afield and astream, "the light of the whole world dies with the setting sun".

Burke was the first man abroad next morning. The noise of breakfast preparations awakened the three boys. Burke said to them as they emerged from the tent: "There's a couple buckets of water by the boat. I brought 'em from the spring a little while ago. Wash basin's hanging from a tree behind the tent. Get some soap. Douse your heads and clean your teeth. Then, come and get it! Breakfast's ready!"

Sliced oranges, breakfast food, bacon, hot cakes disappeared like ice in July. By the time the breakfast dishes were washed, the early morning dew had vanished. At Burke's command, they all turned to and policed the camp. They removed blankets and all articles of clothing from the tent and spread them upon the grass to be cleaned by the sun's rays. Gib swept out the tent while Joe and John hung the wash basin and pots and pans on their respective nails in trees. Towels were tossed over bushes to dry. Finding some old bricks nearby, they made a fireplace, burning therein debris and refuse collected about the camp.

Burke nodded with approval: "Fine job, gentlemen. We'll leave the bedding and clothes in the sun for a while. Prevents them from getting damp and sour. Let's find some bait and go fishing. While early morning is the best time for bass, we can catch a few during the day on minnows. In case the bass won't bite, we might dig some worms to fish for bluegills and sunfish. They're great fun. Did you ever seine minnows, fellows?"

Receiving a negative reply, Burke said: "Well, then, come on. Joe and John, you get the minnow pail. Gib, get the net. Better bring the hatchet, too."

"What's the hatchet for, Dad?" Gib asked.

"To cut two poles for the net," Burke replied.

"Mm, I see," Gib sort of snickered. "Thought maybe you intended to tomahawk the minnows!"

"Wisecracker, eh!" Burke laughed. "One more like that, young fellow, and I'll douse you in the dam. May do that anyway. Let me have that hatchet."

Burke cut two poles seven feet long and an inch thick at the butt. Trimming off the branches, he laid the poles on the ground about four feet apart and parallel. Six feet long and four feet wide, there was attached to the minnow net several lead weights at one end and a couple cork floats at the other end. At three places on each side, he tied the net to the poles. Then, he rolled the net around each pole one and a half times. Straightening up, he said:

"Now, gentlemen, we're ready, just as soon as I get my boots. Let's try Laurel Run below the dam."

As they moved downstream, Joe asked: "What's the lead and cork for?"

Burke chuckled. "Wondered how observing you fellows were. Fifty yards farther on, we'll try some of the pools. The lead keeps the front of the net down to the bottom of the stream. The cork keeps the back of the net at the surface so the minnows won't escape as the net is shoved forward. Here's a likely pool. Let's try it."

Burke waded into the stream and started working upstream from the tail of a pool. Holding the poles at the ends, he let the lead sink the front of the net to the bottom.

(Continued on Page 22)

The boys were very much engrossed with their fishing when this photo was snapped.

AT YOUR MERCY

By E. LLOYD KING

DOES the average Pennsylvania angler actually want better fishing? If so, just what does he mean when he gives expression to such desires? Especially what does he imply when the thought is translated to his personal relationship with the sport? What contribution is he ready to offer; how much time and thought is he willing to donate to improve conditions? Is he ready to forego the taking of live forage from game fish water; would he welcome a suggestion to reserve some especially adapted trout and bass water to these species alone and permit the common fishes to propagate therein as forage exclusively? Is he sincerely ready to make an effort to switch from live bait to artificials? Does he look upon angling as a healthy, wholesome outdoor sport; or does he simply wish fresh fish in the ice-box?

It seems almost unanimous that everyone wants more and bigger fish in the streams; from there on paths and ideals seem to diverge—diverge to such an extent that oftimes the outlook seems just a bit disheartening to the writer. Say what you will, some fellows seem to think fish simply grow in water, were always there and always will be. Others discourse at length upon their personal sportsmanship and then visit the waterways and kill a full creel of six inch trout or nine inch bass at every opportunity. Still others destroy forage riffles for perhaps years to come in the search of live bait; another group will carelessly trample fences and growing crops, irritating landowners and likely closing more fishing water to the public.

One fellow will say the problem may be solved by slapping a lot of big fish into a stream and hang the forage; his buddy just as emphatically insists plant the forage and the finny population will take care of itself. Some yell to the moon for restricted waters, your correspondent one; another simply wants protected breeding areas; a third says artificials only are the solution, still others want to kill fish of any size, any number, at any time in any old way possible. Anyone doubting the latter assertion need only refer to the pages of PENNSYLVANIA ANGLER and note pictures of confiscated illegal catches and the accompanying description or photos of devices employed. Man is predatory and his instincts are still primitive when the scent of the chase fills his nostrils; man is selfish and most often back in the inner recesses of his sub-conscious mind is inclined to lean toward personal whims first; the veneer of civilization is thin and in unguarded moments some individuals seem to revert to the jungle lord of the misty past and yield to the lust to destroy—to kill unnecessarily and beyond the limit of personal needs. After all several centuries of niceties can hardly be expected to completely erase the heritage of a million years.

Ofttimes little personal idiosyncrasies of the individual may have a harmful or conservational tendency. Comes to mind an old friend, a good scout if there ever was one, who derived his piscatorial pleasure through the gathering of bait, a most harmful practice. Always gathering bait and never going fishing. Practically every Thursday or Friday evening he would journey to a little rocky bass stream and uproot perhaps 50 helgramites. Returning he'd say: "You ought to see the fine bait I got last evening. Going fishing Saturday afternoon." Upon being asked Monday concerning the outcome of the fishing expedition, invariably he would reply: "Didn't get going". He drove to Gettysburg or Harrisburg or Lewistown or some other place instead.

Then there was another fellow, a more harmless type, who liked to go fishing just for the drive. He talked fishing, read it and lived it through the pages of magazines, bought all kinds of tackle, tried everything new at least once, *but he didn't fish*. He would consent to go fishing anytime, anywhere, at the drop of a hat, furnish the car, the eats and frequently the tackle. But as the party arrived at destination, he would begin to cool off, suggest it didn't look good and how about going somewhere else. If the remainder of the gang consented another ten to fifty miles drive was in store, or even a third and fourth journey all on the some day. Possibly half a dozen streams in half as many counties would be visited with mighty little, if any fishing, anywhere. This boy got his kick out of driving around from stream to stream and buying tackle; after these chores were completed the other guy was welcome to the fishing. He destroyed neither forage nor fish and had a swell time nevertheless.

Last year in midsummer issues of PENNSYLVANIA ANGLER there were articles by several practical fishermen with a reasonably general knowledge of bass problems in the Keystone State—especially as regards supply and demand. Offhand as I recall two of these articles were titled respectively "The Bass Crisis" and "Back-to-Nature Bass", the former discussing the life cycle, habits and food requirements of the species, the latter introducing a suggestion for possible improved fishing. The articles covered the situation nicely and the writer greeted both with more than average interest. He hoped many additional fishermen might adopt artificials as a result during 1939, but now sadly fears he witnessed increased bait hunting in fishable water by more fishermen than ever before. And as surely as the moon follows the sun, live bait users are killing the goose that laid the golden egg—the practice of going into fishable water and competing with game fish for forage, in fact sometimes actually destroying the granary, can end only one way—barren water. No forage means no fish, and were it not for the excellent replacement efforts on the part of the Fish Commission, a work often seemingly impossible in view of the many obstacles, extinction might perhaps be nearer than many suspect. More legal restraint can only come if the practice continues to grow.

During 1939 Pennsylvania had over 400,000 licensed fishermen; besides there was a sizeable number of youthful anglers under the age at which a fee and identification tag are necessary to legally pursue the sport. The bass season ran from July 1st to November 30th—within one day of 22 full weeks. Now

Harry Keller, Capitol City angler, with that Susquehanna walleye.

ome fishermen visit the streams several imes each week during the course of a sea-on; others perhaps only a few times. Most onfirmed bass fishermen, however, likely verage better than once a week, some almost laily. But to save argument let us pre-uppose each of the 400,000 visited the streams once a week, a total of 22 times each season, or an aggregate of 8,800,000 trips. Many of the fishermen secured their legal supply of bait from the stream upon each visit; suppose each fisherman would have claimed that privilege? 400,000 licensed ang-ers visiting the streams 8,800,000 times have the right to remove 304,000,000 bait fish or fish bait, *or to put it another way—bass meals.*

Over three hundred million bass meals; just about enough to feed two-thirds million bass for one entire year. Continuing the hypothesis, it goes without saying in the absence of three hundred millions bass meals, the two-thirds million additional bass never grow to maturity. Which plan seems the more reasonable—general adoption of arti-ficials, conservation of forage and water teeming with bronze backs or to continue robbing the fish of his food with the pros-pect of fewer and poorer conditioned bass as each season rolls along?

At first glance the above figures may look cock-eyed—but are they? We all know some of the 400,000 use artificials on bass. But how many fish bait and bait fish do thousands upon thousands of lads under the licensed age consume? How many are consumed by the thousands upon thousands of trout fish-ermen, *a practice growing with each season.* Over three hundred millions for human use as bait might well prove too conservative an estimate.

Now with regard to the improved fishing plan—apparently it was accepted just as lethargically by the fishing public. As far as the writer knows, no one fishing club or group got behind the idea with a little push —with a request that a suitable section of one or more streams be set aside as an experi-mental project to determine the feasibility of the idea. One fellow about summed it up when he said to the writer: "I hope I can get around and tie into one of the big breed-ers if they try it.' That about covers the situation; he's an enthusiastic bass fisherman, but didn't give a hang about propagation; simply speculated upon the chance of smack-ing down one of the stock fish at the first opportunity.

But specifically to return to the midsummer articles as a whole, I would like to suggest it is worth the effort of the conservationist to secure a copy of these discussions and give them careful consideration, especially if details are forgotten or perchance not thor-oughly digested in the first place. It is not yet too late to lend thought to the sugges-tions; certainly the back-to-nature experi-ment would not cost much in either time, money or effort, and might prove a great deal, even revolutionize this thing called bass propagation. A small fishing club should be able to successfully see an experiment through, and if it did not serve any other purpose, several members might actually tie into a big one or two and have a life-long memory to cherish just as my day dreaming friend envisioned.

Sometime back an alarmed fisherman came up with the idea to raise the license fee to $5.00; further suggesting that the additional revenue be set aside as a fund to produce forage. Excellent if feasible, but is it? Forage must be planted it is true, but should it be stocked so that anglers may secure a supply more easily? Stocking of forage means just about that so long as present in-roads continue—even increase. After riffles are dug over and uprooted, the habitat of minute aquatic life and vegetation destroyed perhaps for years, how is forage expected to take hold and propagate? After all forage life needs food too; if to propagate naturally and compensate the effort of planting; it must have a full healthy belly and its micro-scopic young must be able to easily find organisms to eat. These organisms disappear when the rocks are turned over, when grasses are rooted out, when silt is stirred up and bottoms disturbed. Don't forget the golden rule of the lower kingdom of life is "Eat and be eaten."

Simply throwing a lot of minnows, stone catties, crawfish, etc., into the streams will not solve the situation in entirety and with-out careful cooperation on the part of anglers. No one would be so foolish as to suggest that hatcheries might produce enough forage to sustain the fish life in the stream without nature's assistance, or do some fishermen harbor the thought? Let us conservatively pre-suppose a bass consumes two morsels of

(Continued on Page 16)

Elmer White of Harrisburg with his late season smallmouth from the Juniata.

BASS LIKE TROUT

Foxy Creek Smallmouths Offer Real Sport on Light Tackle

By ALEX P. SWEIGART

DESIGNATE the fighting qualities you admire most in the brook trout, brown trout, rainbow trout, pickerel and wall-eyed pike and we'll match the aggregate, inch for inch and pound for pound, in a well-conditioned smallmouth bass from one of our ledgy rock-bottom creeks. Here is a fish that asks no quarter and gives no quarter, a swift hard-lunging striker that embodies, in the humble opinion of the writer, those characteristics most sought in a freshwater game fish. Aggressive and a bold leaper, particularly when around the two pound stage, the creek smallmouth is also capable of a cunning underwater battle, quick to take advantage of sunken logs or other cover in its battle for freedom. In this bronze-mottled, spike finned gamester of our warm water streams, nature offers the freshwater fisherman the superlative in quarry. For those doubting Thomases who hold our trout on a pedestal, it is suggested that one bass weighing about a pound be taken on regulation fly fishing tackle, i. e. a tapered line, leader tapered to 2x or 3x, and fly rod weighing from 4 to 5 ounces or slightly over. A streamer fly of the type described by E. L. King in his fine article "Nary A Spinner" appearing in the May issue, completes the assembly. Try it and be convinced.

Now, from the angle of gameness, there are bass and bass. That goes for largemouth as well as smallmouth. In recent years, the impression has seeped through the thick skull of the writer that, other factors being equal, the type of water in which bass occur governs to a major extent these fighting qualities. A largemouth bass taken from a mud bottom pond, carrying high summer water temperature, tends frequently to sluggishness; take a fish of the same weight from a cold, rock bottom lake such as Lake Gordon in Bedford County and its gameness is not to be questioned.

Just what bearing water temperature has upon the fighting qualities of the smallmouth bass in creeks is a matter open to question. Certainly, the well conditioned bass to be taken in Penn's Creek, with its usually low summer water temperature in that area above Mifflinburg, Union County, possess amazing staying qualities and driving aggressiveness. On the other hand, those smallmouths taken from Tuscarora Creek, Juniata County, and Sherman's Creek, Perry County, even when summer stream temperatures ranged in the low 80's, gave a splendid account of themselves. It is to be noted that all three streams are characterized by swift swirls and riffles and it is possible that abundant aeration may play some part in the picture. Then again, the availability of an abundance of natural forage, minnows, helgramites, stone catfish, crayfish and bullfrog tadpoles certainly has bearing on the battling merits of his highness, the smallmouth bass. We have found that, in our ledgy, rock-bottom creeks, a well fed bass, heavy in girth for its length, can be counted upon to give the fisherman the thrills of a lifetime.

All of which brings us to this cardinal principal, governing not only bass, but all species of game fishes: Any body of water, to furnish a maximum number of well conditioned bass, must afford a maximum amount of forage upon which they rely. Of our Pennsylvania bass streams, the creeks offer the greatest problem in this respect. Their food producing riffles are easily accessible to the live bait fisherman with his four foot minnow net and intensive netting of bait fish and fish bait may seriously cripple the supply of bass forage. No matter how fecund stream minnows such as the silver shiner may be, to thin down the supply of brood minnows by over-nettting for bait fishing purposes is certain to result in a serious shortage of available bass food of this type. The same goes for the crayfish, helgramite and stone catfish. Lakes and major streams such as the lower Susquehanna River are much more inaccessible to live bait netting and inroads on the available supply of bass forage are correspondingly light.

In recent years, it has appeared that creek smallmouth bass have been displaying increased wariness in their striking tendencies, somehow giving more of an impression of trout in this respect. Perhaps prevailing low, clear water in many streams has been a and then again, maybe it's only imagination. strong contributing factor to this tendency, But one thing is certain. Careful fishing, avoidance to as great an extent as possible splashing and thudding about in wading, and long casts have yielded far more action from these fish than careless methods. It may be that a vastly increased number of fishermen on these bass waters also has been a factor in this process of bass education. The fact remains that, while years ago two or more bass could be very often taken in the same flat or pool without moving on, one fish landed today usually has put the remainder down for some time to come. Smart bass are highly desirable bass and the day may not be far distant when it will be necessary to resort more and more to methods smacking of careful trouting in taking creek smallmouths. This should make the sport all the more appealing. Certainly there is atmosphere on one of these ledgy streams with its tree fringed shoreline comparable to that of many of our trout waters.

With the approach of another bass season, conservation of bass forage in streams of this type again enters the limelight. Few fishermen, with the welfare of their sport at heart, can fail to regard with serious concern the consequences that are certain to follow intensive riddling of our smaller bass streams for live bait. Apparently, the best course to follow at the present time is to convert more and more fishermen to the use of artificial lures in taking bass. Once converted to the thrilling sport afforded by the fly casting or bait casting outfits, it's a fair bet that the average fisherman will wonder why he ever bothered lugging a bait bucket along a stream course on a hot day or worked hard to secure a pailful of minnows, half of which may have died before he reached the stream.

The fisherman contemplating a swing to artificials this year has two choices, the fly rod or the bait casting rod. Both are sporting and either, when mastered, will yield plenty of action. While the writer has strong affection for the light bait casting outfit, it must be conceded that, in the matter of strikes, particularly during the summer months, the fly rod will outscore light casting lures. On the other hand, in taking heavy fish, we believe the light lures to hold an advantage in our creeks.

Fly Fishing

First, in considering this phase of the bass fishing sport, let's turn to equipment. Because

The creek smallmouth is tops for either fly caster or bait caster.

Light lures, one half ounce or under, are ideal for fishing stream flats such as this.

of the punishment it is likely to undergo in handling fly and spinner combinations and floating lures, the fly rod should weigh from 5½ to 6½ ounces, be from 8½ to 9 or 9½ feet, with many fishermen preferring the latter lengths and have plenty of backbone. The single action reel (some prefer the automotic) should be large enough to nicely accommodate a good C level or D level enameled line and backing line. Leaders will probably always prove a matter for argument, but many fly fishermen of our acquaintance find artificial gut testing 8 or 10 pounds satisfactory and economical. Some like 15 pound test gut.

Lure selection is apparently a matter governed chiefly by locality. On the North Branch of the Susquehanna, floating lures such as the hair frog and other deer hair creations have yielded some mighty fine smallmouths in recent years. With the creek bass in the central counties, however, success with this type of lure has been slight. Here it is that the old standby fly-and-spinner combination as well as streamer flies, in other words, underwater lures, have worked to greatest advantage. Spinner sizes preferred are 1 and 2 generally, with a leaning toward the copper spinner. The tandem spinner also is popular. Fly sizes range generally from 2 to 4, with the following patterns being much in demand: Montreal, Royal Coachman, Parmachene Belle, Grizzly King and Red Ibis. The Black Gnat, and Grey Hackle might also be added to the list. William R. Walton, veteran angler and top-flight American fly fisherman, discusses the technique of effective fly rod fishing for bass in detail in this issue. Up to the minute tips on fishing floating lures are given by Chas. M. Wetzel.

Bait Casting For Bass

When it comes to selecting the bait casting outfit for smallmouth bass of our creeks and smaller streams, place the emphasis on light equipment. Casting lures weighing from ¼ to ½ ounce require for handling a rod of light tip action, either tubular steel or bamboo. If the steel rod is selected it should be at least 5½ feet in length, while for more effective handling of the light lures, the bamboo should have a length of 6 feet, "light action" designated. Lighter waterproofed casting lines, either hard or soft braided, are also essential, with lines of 9 or 12 pounds test fitting into the assemblage nicely. With reasonable care, two fifty yard spools of line should see the bait caster through the season. It is a good plan to turn the line after perhaps one month's use, thus assuring even wear.

Now we come to selection of the reel. There are a number of excellent, easy running, quadruple multiplying reels now on the market below the ten dollar figure that should serve well for a starter. Some fishermen prefer the cork arbor on their reels, but our preference is for a filler of good backing line. With light tackle, there is always a chance that a hefty fish, bass, walleye or pickerel, may stage an exceptionally long run after the strike and then it is that the filler line is good insurance. Old line serves well as backing so long as it retains its strength, and it is well to test such line between the fingers before placing it on the reel.

When streams are low and clear, the use of a leader, 6 to 12 feet in length and attached to the line with the well known double barrel knot, is productive of many strikes. Synthetic gut, testing 10 or 15 pounds, when thoroughly soaked makes a first rate bait casting leader. The barrel connection attaching leader to line ties into a tiny compact knot, slipping easily through the level winding device on the average casting reel. Use of the smallest snap swivel obtainable, size 12 swivel and size 0 snap, bronze finish, is a handy adjunct for attaching lure to leader and will be found a time saver in changing from one plug to another.

Now to lure selection. Light lures, weighing from ¼ to ½ ounce, permit casting in our smaller streams with a minimum of disturbance, hence are to be ranked as most consistent in taking creek smallmouth bass. Solely in the interest of live bait conservation, the following lures are listed: Eight favorites of the writer happen to be: (1) The Heddon Midget River Runt, shiner or perch finish, ⅜ ounce, a slow sinking wobbler; (2) The Midget Plunker, perch finish, made by Creek Chub Bait Company, weight

(Continued on Page 27)

Surface plugs are good bets in bait casting for largemouth bass.

FLY ROD BASS FISHING

By PETER J. SCHWAB

ALMOST any boy or any old woman knows *how* to fish. Mostly they also know *when* and *where* to fish at least they haven't much to learn from barometers or old fishermen's calendars. The plain facts are that fish eat *when* they are hungry enough and *where* food is obtainable in sufficient quantity to make foraging worth the trouble.

These things, plus the combination that bass are normally twilight or nocturnal feeders and fly fishermen can't see in the dark, make for good warm weather fishing in the morning twilight and the best *fly* fishing in the evening twilight or from the last hour or two preceding sunset until dark.

Overcast skies, with temperatures and velocities also enter into it to the point where experienced fishermen come to rely upon instinct, and the tyro won't be far wrong if he does the same thing. These things have been written about and talked about endlessly, most often with no regard to the universality of Nature and Life. Forty-five years of fishing, widespread and wide flung, have taught me that when I feel particularly good, exhilerated, the birds of the air, the beasts of the field and the fish of the water feel the some way. That's when the fishing is at its best.

It's all so complicated, and yet so simple, that I'd rather talk about tackle, specifically bass fly fishing tackle at this moment. That's something of interest to bass fishermen. The boys . . . and the old ladies . . . get along with much less and have just as much fun.

Lines

From the standpoint of the fish, the most important item of your tackle is what you have at the end of your leader, the fly or other lure; but fishes' tastes are simple and we may reserve them for the closing paragraphs. From the viewpoint of the fly fisherman the most important item in his equipment is his rod. That's wrong, I think. The rod is his most *expensive* piece of equipment, but the line is his most important.

It's the line projectile which must carry your lure, light or heavy, downwind, across the wind, and into the face of the wind. If the line isn't right you won't throw it very far, you won't throw it straight or you won't throw it lightly. Neither will you throw the wide assortment of lures so often employed by the bass "fly" fisherman.

By far the greater majority of double tapered lines are too long in their front tapers and tips to be easily straightened even when employing small trout flies. Though much used they are still less adequate for carrying the large flies, streamers, bucktails, and bass bugs used by the fly fishermen, or the small plugs, spinners and spoons used by the fellows who fish with fly rods.

Fit your line to the fishing, and fit the rod to the line . . . and yourself, of course. My abhorrence of double tapered lines is well known to readers of SPORTS AFIELD, and was touched upon in the January, 1940, number of the PENNSYLVANIA ANGLER in which I gave instructions and specifications for splicing your own torpedo head tapers if you don't care to buy them factory braided. I consider this type of taper the only one which has the necessary weight out front to carry the lure without overburdening the rod; which has the scientifically correct taper and tip length to straighten; which can be straightened and turned over in the air so that the lure strikes the water in advance of the line (instead of rolling out on top of the water, making the wake of a watersnake and finishing the cast with a final splash of the lure) and which has the small diameter, light weight shooting lines necessary to obtain distance when distance is needed.

If you present rod carries either a "D" or "E" level line or an HDH or HEH double taper, it will carry a Medium Trout and Bass torpedo head taper to better advantage. Whippier rods (or weaker arms) should be fitted with the Light Trout torpedo line, and really stiff "fast" rods should be fitted with the Heavy Trout and Bass taper for average casts or heavy lures. The exceptions to the above recommendations apply to distance casting and the ability to carry into strong winds or accurately across lively breezes.

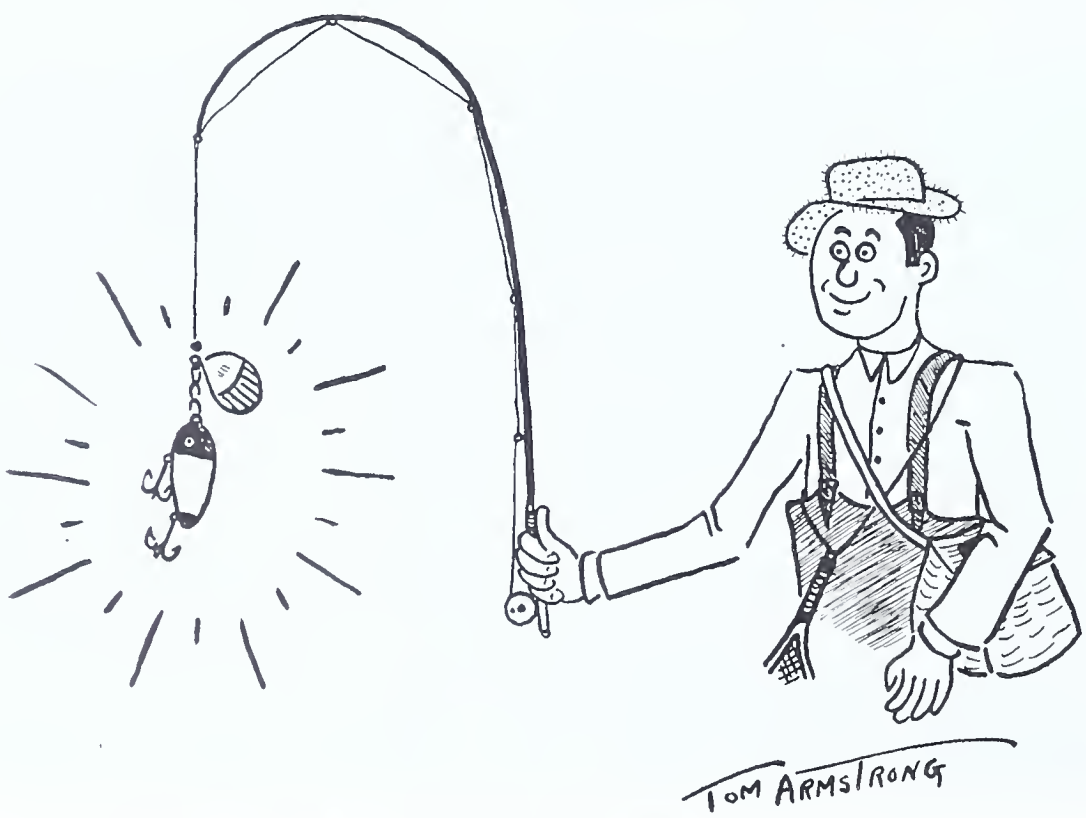
Except in the hands of an expert caster no rod which is not capable of carrying a Medium Trout torpedo head taper will do much in the way of distance, wind or with lures having more weight or air resistance than numbers 2, 4 or 6 wet flies. So-o-o don't expect too much of the Light Torpedo. It will do a beautiful job with small or medium sized flies, but is no great shucks with bugs or heavier lures unless made with at least 15 feet of .055". belly.

Men who don't like lines of .065" diameter because of the difficulty of keeping them afloat (and I'm along their number) will do better to use the Medium specifications, with 14 or more feet of .060" belly for longer casts with largest flies or hardware lures. Any rod which will handle the Medium Trout torpedo head will also handle the Light Distance line described in the January number (easily good for 80 to 100 foot casts, and capable of more under proper conditions) and heavier rods, if real distance is tho object, (or for windy days) will best be fitted with a line spliced something along the following scheme, viz: Tip, 4 feet of .035"; front taper, 2 feet each of .040", .045", .050"; forebelly 10 feet .055"; main belly, 8 feet .060"; aft belly, 8 feet .055"; rear taper, 3 feet each of .050" and .045"; holding line, 20 feet of .040" shooting line, enough .025" to fill reel to capacity.

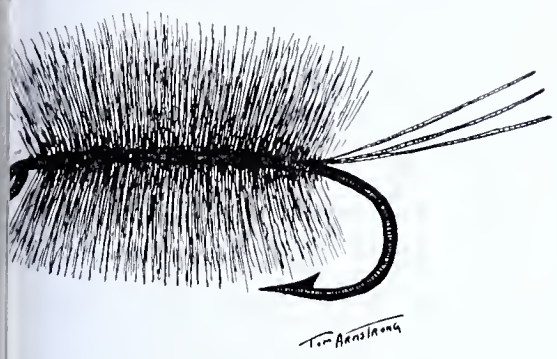
This is about as much line as I care to use even on big water and it is distinctly not a line for the fisherman not skilled in the use of the left hand haul.

If you can't afford the price of a factory braided and finished torpedo head line, and don't care to splice your own, then I'd suggest that you get a "D" level line for flies, streamers, bucktails and even bass bugs. If you use bass bugs altogether, or any of the other lures heaved about by the fellows who use fly rods for their plug fishing (spinners, spoons and small plugs, bucktail frogs, mice, etc., etc., *ad lib, ad nauseum*) get yourself a level "C" line and a rod to handle it. A level line is a better caster than a double tapered line, and while not equal to the torpedo head either in carrying or shooting properties, it can be pointed for more delicate casting with three or four feet of lighter line spliced to the front—or you can use a slightly longer leader having a quite heavy butt. Use your noodle, and pay less attention to the tackle catalogue.

Regardless of the line you select, keep it well greased with a good, *hard* grease—and



Just because you happen to be using a fly rod doesn't make you a fly fisherman.



Michigan Palmer Hackle.

polish it with graphite for maximum distance. (See January number.)

Rods

Assuming now that you've purchased your line, let's see if we can find a rod to fit or carry it to best advantage and least burden on your muscles—that is, if you fish for pleasure. I'm sure of that hobbyist who owns more rods than are *necessary* or good for his bank balance, if any. But the variety gives me something from which to choose and be fussy. Putting it briefly and concisely here's the way I go forth a bassing.

For the line to carry flies up to size 6, I use a fast, but not too stiff 7½ foot, two-piece rod, single built and weighing 3½ ounces with hard rubber reel seat. For the line to carry larger flies, feather minnows or bass bugs, I use a rather stiff two-piece, 7½ foot rod, hollow butt, weighing 3½ ounces with cork reel seat, or another 7½ ft., 2 piece, solid single built rod which weighs 3¾ ounces with hard rubber reel seat. These two 7½ footers (but not the lighter one) are suitable for boat fishing or wading not over hip boot depths, quiet or windy days, and for the longest casts necessary on biggest water.

An 8 or 8½ footer, *still stiffer*, but not over 4½ ounces in hollow butt or 5 to 5½ ounces in solid butt, will do a better job when deep wading . . . not so much for the cast, as for the additional leverage it will give you for the *pick-up*. Big, husky fellows, boxers, wrasslers, muscle bound weight lifters and old fashioned fishermen prefer 9 to 9½ foot rods—of which I have a few dandies, artist built, that I never use.

Static length in a rod means nothing. A 9½ foot weepy rod of the cowstail or grapevine class is not nearly as good a caster as a fast, stiff, light 7½ footer. In fact, the *effective length* of the 7½ footer is probably greater than that of the weepy 9½ footer. Remember that the rod is simply a lever, the first function of which is to magnify the arc of motion and the speed of the wrist travel. The higher the tip speed the further your cast will carry; or, putting it another way, the easier you can swing it the less tired it will make you even for the shortest casts.

All rods bend during the act of casting. As they bend they lose both time and distance, but the bend acts as a cushion or shock absorber to smooth the cast and make subsequent acceleration easier even for skilled casters. After the rod has reached its maximum bend for any cast, fast or slow, it becomes a curved but rigid lever. And it remains that until an *instant after the line, plug, surf casting sinker is on its flight.*

That revelation comes as a distinct shock to the fellows who like to kid themselves about the alleged "spring power" possessed by rods, and the ability of the straightening spring to add velocity to the cast.

The spring adds nothing to the cast.

If the rod had any "power" it wouldn't bend in the first place. If it had the speed attributed to it, why doesn't it race ahead of the projected line of the rod through the corks? No. boys and girls, the rod only starts to straighten after the load has been removed from the tip, and if it don't straighten and come to rest darn fast it will gum up the works for you plenty. A wiggling, vibrating rod will impede the flow of the line through the guides and where will cock robin be then, poor thing?

Any man with sufficient ability to recall the details of a cast, needs no photographs to demonstrate the total lack of "power" in the best rods. All he needs are a few pieces of graph paper, a sharp pencil and an eraser. Start with the beginning of the forward cast, rod slightly bent and at an angle of 45° or more from the vertical. Sketch the line extending straight behind. Then draw the successive bends in the rod, and the trailing (or *departing!*) line in six to ten positions to the peak of the cast and the finish of the shoot. You'll be surprised at what this little exercise will teach you concerning rod actions, and superstitions.

The rod has no muscles, no dynamos, no steam engines. It has no "power" and it only stores energy which is never converted into power during the course of a cast. It does have *resistance to bend*, and that't what you pay for in a good rod. Buy the *stiffest, lightest* rod you can afford, and buy it in a

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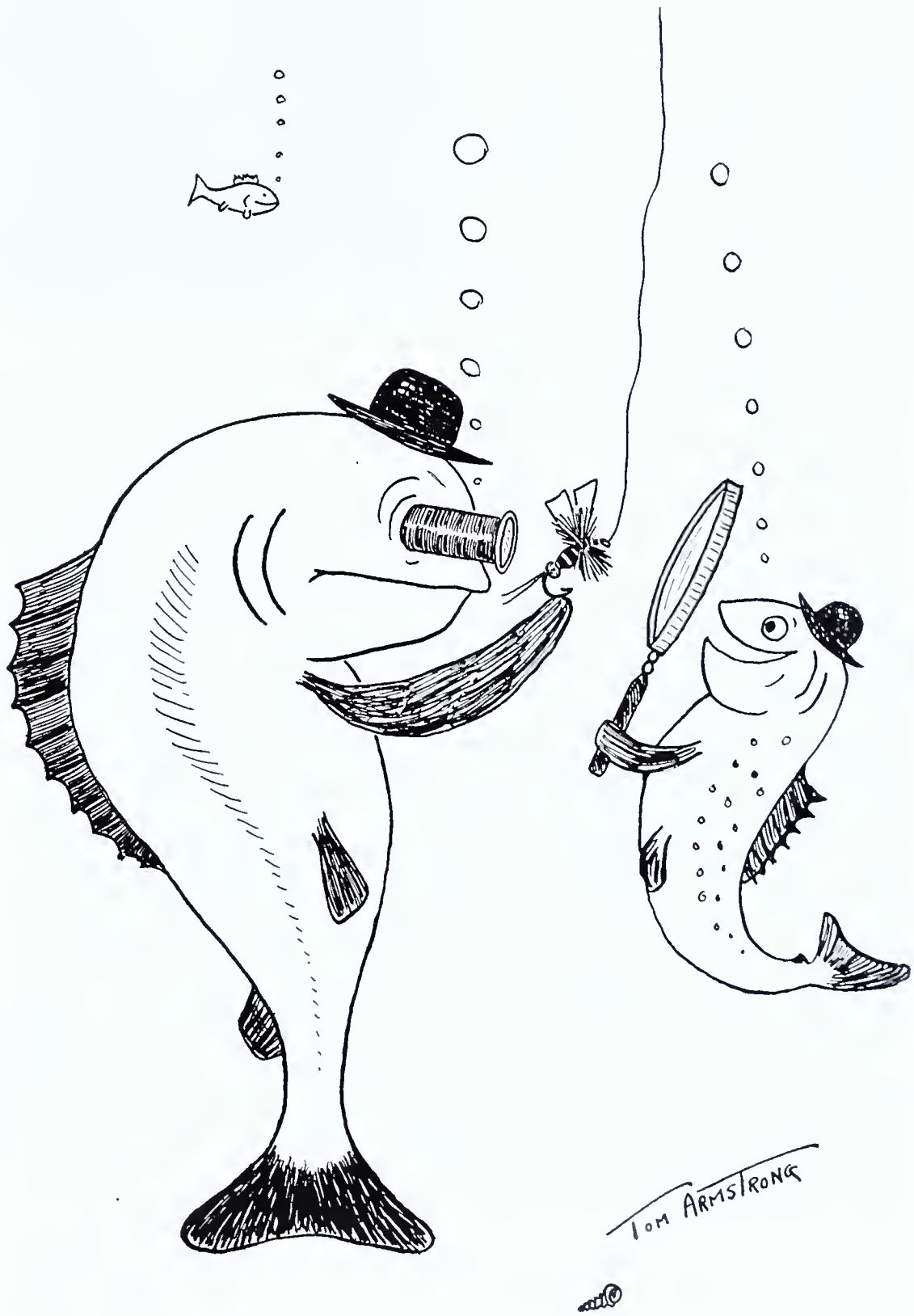


DR. E. M. GRAMM DIES

The conservation of Wild and Marine life lost one of its oldest and staunchest champions in the death of Dr. Edward M. Gramm of Philadelphia. Dr. Gramm was stricken suddenly while on active duty in his offices at 1930 Chestnut Street, on Monday, April 1, 1940. A former professor of dermatology at Hahnemann Medical College and for over 60 years a dermatologist he was one of the leading authorities on skin troubles in the East. He was 80.

Since early youth Dr. Gramm was an ardent follower of Izaak Walton and for many years had been an active member of the Dover Fishing Club of Philadelphia, of which organization he was chairman of the legislative committee. The prevention of stream pollution was one of his pet hobbies; and several years ago when this bill was before the state legislature he was a frequent visitor to the capitol at Harrisburg lobbying for the bill which he had worked so hard to have introduced.

When the Pennsylvania Federation of Sportsman's Clubs was first organized, he proposed to the directors of the Dover Fishing Club that they organize a Philadelphia County Unit. Given full authority to act on this to the best interest of the sportsmen, Dr. Gramm succeeded in persuading eleven similar clubs in Philadelphia County to form a unit which promptly affiliated with the Southeastern Division of the State Federation. He was named chairman of the county unit and occupied this seat until his death.

The problem of the fast disappearing striped bass in our eastern coastal waters has for a number of years been a leading topic for discussion in conservation cricles. So, about eighteen months ago, the president of the Dover Fishing Club asked Dr. Gramm to call a special meeting of his legislative committee and see just what a club in Pennsylvania could do to assist her neighboring coastal states. Special attention was called to the fact that out of New Jersey's 600,000 salt water anglers a very large percentage were visitors from Pennsylvania.

Dr. Gramm's first efforts were toward federally regulated conservation for this species of game fish and he obtained the endorsement of over 400 sportsman's clubs along the Atlantic Coast from Massachusetts down to North Carolina. It soon developed, however, that the time was not yet ripe for the federal government to take a hand so he immediately directed the efforts of his committee toward legislation in our own state that would assist our neighboring states in enforcing those laws already in existence.

Investigation showed that Philadelphia provided an excellent market for bass caught along the Atlantic coast, some illegally. Prompted by this information Dr. Gramm immediately started to work on a bill for introduction to the state legislature that would prevent the sale of this species in Pennsylvania. Through his influence the Philadelphia County Chapter of the Federation succeeded in having a resolution adopted at the state meeting in Harrisburg last February to the effect that such legislation would be endorsed by that body.

It was while working on this bill and obtaining the assistance of other sportsman's clubs in the eastern section of our state to

Edward M. Gramm, M.D.

work with his committee toward this end that he succumbed to an attack of apoplexy in his office on April 1st. His final act on this earth was to mail a quantity of Wildlife Stamps out to local sportsmen and at the March 20th meeting of the Dover Fishing Club he included in his regular legislative report an appeal to each member to buy a sheet of these stamps for the cause of conservation.

He was laid at rest on April 4th in Forest Hills Cemetery by his companions in his favorite recreation, his fellow club members acting as pallbearers.

His entire life was devoted to preserving our outdoor heritage for the future generations of sportsmen.

NEW CLUB FORMED

That northwestern corner of Lancaster County, long neglected as a district in which to have a sportsmen's club, added its name to the list of such organizations in the State, when on March 20th, the "Conewago Rod and Gun Club" was formed at the Kennewood Hotel in Elizabethtown. David Groy, Fish Culturist of the Hershey Estates, led the organization work and did a very fine job. This district includes the towns of Elizabethtown, Bainbridge, Maytown, Rheems, Newville, Milton Grove, and Mastersonville, and represents a total of fifteen hundred hunting and fishing licenses. One hundred and twelve sportsmen attended this meeting and greatly enjoyed the inspirational talk given by "Mike" Seaman, Editor of the Sportsmen's column in the Harrisburg Telegraph and a motion picture supplied by the State Game Commission.

C. Allen Wiker, President of the Lancaster County Federation of Sportsmen's Clubs was also present at this meeting and gave many timely and valuable suggestions on the work at hand in getting a club started in the right way.

David Broy was chairman of the meeting for the evening and the following temporary officers were appointed to function until the regular election on April 3rd at the Kennewood Hotel: Harry G. Hershey, Secretary; Nominating Committee, Walter Longenecker Chairman, and Irvin Baylor, Dr. L. W. Fetter Albert Boltz, Harvey Olweiler, Charles R Boggs, Walter Frey; Membership Committee Ellwood Boyer, chairman, and Milton Heilman, W. G. Mumma, George Doyle, Paul Fisher, Joe. Henderson; Publicity Committee Robert H. Boggs, chairman, and Harry Hershey, G. W. Westafer, Carl Breneman; Constitution and By-Laws Committee, Louis Ulrich, chairman, and Ellwood Grimm, Dr L. W. Fetter, D. Latchem Reem, Chester Engle, and Lester Weidman.

LAWRENCE BANQUET HIGHLY SUCCESSFUL

Conservation of game and propagation of fish were the high lights of addresses made by Ross L. Leffler, president of the State Game commission and Charles A. French commissioner of fisheries, respectively, at the seventeenth annual banquet of the Lawrence County Sportsmen's association banquet held in the Cathedral, District Attorney John G Lamoree was toastmaster. The banquet was attended by approximately 1,200 persons.

The banquet was one of the most successful yet held by the organization which has members in every nook and corner of the county. It was attended by young and old. Dignitaries of sportsmen's organizations from other sections in addition to officials of the city and county participated in the fete. Durin the evening there were addresses, a Lelenko show, distribution of awards and motion pictures of game and fish.

Banquet Chairman W. Henry Rodgers opened the fete, then introduced the president of the association, George Sillman, who in turn introduced District Attorney John G. Lamore, who most ably filled the role. Being a lover of outdoor life, the barrister adeptly handled the situation as though he was drawing a bead on an eight-point buck or reeling in a black bass.

After declaring that the organization was composed of people who have a healthy feeling for God's outdoors he pointed out that the assembly was made up of young and old, both men and women and called Pennsylvania the greatest hunting ground in the United States. He then introduced game and fish organization notables and other prominent persons present.

"Take it easy" is a good motto for any angler. When you seem to have exceptionally few strikes, slow down. Look the water over carefully. Try to decide where is the logical place for fish to lie. Then fish carefully and with as little disturbance as possible. And, above all, fish every spot thoroughly.

LEHIGH FISH AND GAME HAD SPLENDID RECORD

As secretary of the Lehigh County Fish and Game Protective Association, writes Chas. H. Nehf, I am especially pleased to present an account of our conservation work during the past year. In full recognition of the field which we have covered I shall enumerate three definite phases of our activity.

First, our regular monthly meetings scheduled during the winter months of the year as beginning in September and ending in May. To you who attend these meetings I need not stress the significance of the programs which we have prepared. In order to picture the work ahead of us for the remaining months of the current calendar I wish to emphasize three events.

On Thursday, April 25, our annual business meeting at which the nomination and election of officers was held took place. Augmenting the regular session our members enjoyed the fine colored motion pictures of Randolph Thompson of State College, Pa. Mr. Thompson, who is employed by the State Game Commission projected reels of pictures which had been recommended to us as something we had never seen in the Lehigh Valley.

Thursday, May 23, has again been set aside as our annual fish night. District Warden C. Joel Young has arranged the showing of colored motion pictures on Atlantic salmon and trout angling in Newfoundland. Mr. R. H. Tait of the Newfoundland Tourist Information Service, New York City, will be here to personally show the pictures.

Saturday, July 27, the last Saturday before the closing of the trout season will mean another big event for our members. For the eighth consecutive year we are again arranging the live trout fishing contest. Since its beginning by our club, many organizations all over the country, have followed the idea of our yearly summer picnic at Dorney Park. The rules have been revised to accommodate the increasing number of fishermen who wish totake part in these events.

Looking ahead into next fall finds our calendar booking for Seth Gordon, Secretary of the Pennsylvania Game Commission, on Thursday, October 24, 1940. These are your meetings to which we extend our welcome. Come and enjoy the spirit of good sportsmanship that such fellowship can create. Surely our attendance, ranging from 132 to 309, speaks well of our efforts. May we see you more often.

The second scope of our activity is practical conservation. This is manifested through the purchase of 10,000 seedling trees which we have ordered for spring delivery to the Allentown Park Department for their reforestation work along the Little Lehigh. Results of former plantings can be seen in the fine stand of pine trees along the Lehigh Parkway between the former Young farms and City Forester Price's residence.

Fish which are not killed in the live fishing contest are later stocked in the Cedar Creek, Dorney Park boating dam, and the Lower Little Lehigh. Last year our efforts towards fish restocking in these places was shown in the 823 large trout liberated in open waters. Fish stocked through our efforts ranged in size from 12 to 25 inches. Should you catch any of the tagged brownies this spring, kindly notify either Mr. Young, our fish warden, George Zimmerman, Honorary Secretary at iCty Hall, or myself, in carc of Call-Chronicle Publishing Company.

Through the combined efforts of the Unami Fish and Game Protective Association, Emmaus; Alburtis Rod and Gun Club; Macungie Rod and Gun Club; Rural Sportsmen's Association in Upper Macungie Township, Trexlertown, your association has cooperated in the splendid stream improvement which is being continued throughout the entire course of the Little Lehigh from Berks County to Fountain Park, Allentown.

We may also add that we play our part in assisting the local fish and game protectors in stocking our allotted portion of Lehigh County in both fish and game. This is all to our mutual advantage.

The final and most important field of our work is bringing the younger folks of Allentown to appreciate the great outdoors which the Creator has provided for all. Fifty junior admission cards were presented to selected pupils in the Central Catholic High School, Harrison-Morton Junior High School, Central Junior High School; and the Raub Junior High School. These boys, through the choice of Stanley Youkonis, Dewey Fenstermaker, Thomas Jacks, and your secretary, are now the special guests of the Lehigh County Fish and Game Protective Association. We hope that they enjoy our program and may profit by the things which have, and will be said or seen here this evening.

In behalf of the Association, I wish to formally welcome all our members, guests, and friends. Your presence has made this 19th annual gathering a great success. May we see more of you in the future.

Fishing, at any rate, is a harmless sport. No fisherman ever hooked another by mistake for a bass.

SPRINGDALE CLUB PLANS BUILDING

The Springdale District Sportsmen's Association President Jack Fritz has appointed Carl R. Mellon, T. D. Montgomery, George M. Hawk, Frank McCulloch, Herbert Leipertz, Edward H. Spix, H. J. Clowes, Frank H. Mitchell and Howard Brown on the building committee. The duties of this committee are to locate a suitable location for the construction of a building for the sportsmen.

The sportsmen have approved the granting of life memberships to all members of the association who contribute the sum of $25 toward the building fund. This sum of $25 can be paid into the club in a lump sum or over a period of twenty-five months.

The sportsmen have amended the by-laws of the organiaztion to include the nomination and election of five directors from the members of teh organization, who together with the officers of the association shall comprise the board of directors to manage the affairs of the club.

President Fritz appointer a nominating committee of six men to make recommendations to the membership for the selection of men to serve as directors. A. G. Anderson, Homer Philips, E. B. Sutch, Victor Nery, Frank Scholtz and Ray Cochran were appointed to serve on this committee.

Fond memories of Charlie Hawk were recalled when George Hawk, his son, presented the sportsmen with a $25 check to go toward the building fund when the club is incorporated. At the mention of Charlie Hawk's name many were the fishing and hunting stories recalled by some of the sportsmen.

This country would still belong to the Indians if our pioneer forefathers had sat around waiting for congress to solve their problems.

Allentown Call Photo.

At the annual meeting of the Lehigh County Fish and Game Protective Association, (left to right) Charles A. French, Commissioner of Fisheries, R. A. MacCachran, assistant chief, Division of Lands, Pennsylvania Game Commission, F. Al Brown, Association president, Victor Cody, sports cameraman, and George Zimmerman honorary Secretary nf the Association.

AT YOUR MERCY

(Continued from Page 9)

food—minnows, catties, helgramites, crayfish or what-not—on an average for each day of the active period, roughly April through to early or mid-November, an aggregate of perhaps 450. If the hatcheries are to be forage granaries, then for each six bass, the daily creel, there would be required almost twenty-seven hundred living organisms artificially produced. With only one thousand foraging bass in each mile of stream, all sizes, a hatchery output of almost one-half million fish bait or bait fish might be needed in the space of a ten minutes walk. How many do you think it would take to feed the bass alone in the Susquehanna River and tributaries from Conewingo to the source of both branches? You're right, fellow, it wouldn't be possible to count them in a lifetime.

The writer may seem a bit cynical; sadly he assumes a right to be. Personal observation is responsible, actual experience, first hand knowledge of conditions in a long stretch of the Susquehanna and Juniata Rivers ranging from Harrisburg westward to some miles above Newport on the William Penn Highway and the accompanying watershed. Sometime ago a lot of brood bass were privately imported from Maryland and placed in nearby streams under the catching phrase "Bass Unlimited". The plan may be entirely feasible and I'm the last fellow to quarrel with anyone putting a nice bass or two into my favorite haunts; I'm funny that way, it's nice to know they're there. But I'd much rather have seen the investment devoted to forage—crawfish, sunnies, catties, bluegills. Hazarding a guess I would say there are already plenty baby bass in the river. Last summer and autumn this fisherman followed both rivers on an average of twice weekly, from one-half to a whole day each time. Your narrator does not hug the shore and scorns a boat; he wades with shorts from bank to bank, follows the ledges and weed patches like a stalking crane, knows almost each hole and rock by its first name. Low clear water all summer long, wading criss cross back and forth for hours on end as only a fly rod purist will, the alarming scarcity of forage was all too apparent, a half blind man could not possibly overlook that condition. There were thousands of baby bass, the shallows and shore lines spotted with them. During July and August bass smashed dragon flies ravenously; September and October stomachs were pretty generally empty; frequently if filled there was a partly digested baby bass. Minnows—there were only a few places where bait fish could be found in goodly supply at any time. True, two such stretches, the exact location a well guarded personal secret, abounded in bait fish. Needless to say the writer and his immediate family took some mighty fine bass out thereabouts; other spots the pickings were rather lean. When a bass was detected working the shore line where bait fish were negligible, investigation would usually disclose that he was chasing baby bass. Fishermen might well give this matter a bit of thought; true it is rather a limited observation over a short stretch of water, but this angler does not procrastinate.

Incidentally accompanying this article is a picture of Elmer White, Harrisburg, a friend and co-worker of the writer, together with the former's big 21½ inch, 4¾ pound smallmouth, taken from the Juniata adjacent to one of the spots where there still seems to be a reasonable supply of forage. This fish, landed late in November after most fishermen had laid aside rods in favor of firearms, was in unusually fine condition, the exception rather than the rule in the lower Juniata.

Only three or four miles away but in the Susquehanna River, Harry Keller, Harrisburg, landed the big walleye also pictured. Stretching the tape to 28½ inches and weighing in excess of six pounds, this husky specimen was merely the nicest in a fine October catch of big ones. Needless to point out forage conditions are also fair to good thereabouts.

Nature has a proper balance; forage and bass go hand in hand and prosper accordingly if undisturbed. With modern overcrowded waterways, little practices wholly harmless a decade ago now assume paramount importance. Disregarding big floods or extended droughts, usually it is only when man goes into the stream and destroys nature's balance that the food situation becomes serious. Approach the problem from any angle, there is only one sure solution, Mother Nature's way—sensible, careful restraint, ranging to absolute prohibition when and where conditions warrant, on the removal of crustaceans, minnows, helgramites, catties and all living organisms from game fish water; positive outlawing the disturbance of bottoms, uprooting of rocks, destruction of grasses, digging of banks and kindred indiscretions. The live bait fisherman should secure his supply elsewhere than on or adjoining to fishable water—just like the flyman and the artificial bait caster. Then and only then let us drastically raise the license fee and pour unlimited costly propagated forage into the streams, if necessary; then let all of us catch a lot more and bigger fish.

A plan suggested in my article "Why Not a Flivver Fly Rod Outfit" and almost equally important in long range planning is to help the neophyte secure a practical workable outfit for artificials at the lowest possible cost. Here is where experienced flymen, pluggers and members of fishing clubs might enter into the picture with practical advice and assistance to amateurs. Too many willing to try artificials are scared off by the reputed cost of equipment; too many do not know that a rod costing only six to seven dollars may have good action and take a lot of fish; a 75c reel holds line satisfactorily for the flyman, a bit more costly for the bait caster; a $2.00 line will take both bass and trout readily once the angler masters his particular assembly. Such an outfit will give the fellow with a lean pocketbook a lot of fun, decidedly more sport, fish and pleasure than he can ever attain with the live bait can. Emphatically the writer does not wish to advise the man of means to buy a $10.00 spread when he can afford $20.00 or $30.00. Say what you will, the higher priced outfit offers only more refinement, likely no more fish if the two cheaper assemblies are skillfully employed. Just compare an $1800.00 car with one costing $800.00, the former offers a lot more smoothness, ease and salves the old egotism, but the latter will get you there and back just about as quickly and safely.

Then too many tackle stores employ a shortsighted policy as regards the new customer. As the neophyte approaches the clerk, who all too often does not know fish or fishing well, especially skillful use of artificials, the former is shown the higher price jobs, rods costing $20.00 to $50.00, all the while being fed a lot of talk about buying only the best, you don't want this or that, etc. Result friend neophyte usually walks out and goes back to bait, and with an altogether wrong impression of artificials. I say this is a short-sighted policy and advisedly so. Perhaps the clerk is working on commission, but likely he effectively destroys a source of future fat revenue. It is a known fact that artificials grow on the user; at first he approaches them gingerly and with moderation, as skill and mastery develops he wants better equipment. In time and at will as the pocketbook permits, he replaces the humble beginner's outfit with more delicately balanced rods, more sensitive reels, snazzy double tapered lines, exquisitely fine leaders and lures by the score; he actually begins to buy in profitable amounts and without urging. In short he willingly invests time and again in the expert's tools whereas before he bought only a few cents worth of worm and minnow hooks together with about 50 yards of some cheap linen line and perhaps a steel rod. The movement toward conservation needs more cooperation in the tackle store. It is hard for the amateur to buy properly now; there is a fortune waiting around the corner for the outfitter who assembles a good complete balanced fly rod assembly even down to the leader, ready to fish, at a price that won't scare away the not too prosperous beginner; the same is true as regards the plugging outfit.

Before concluding I wish to caution readers against the possible error of misconstruing any part of this article as an oration in opposition to live bait angling; nothing could be farther from the truth. The spirit of America is tolerance and my personal code in life is live and let live. In intent by word is only a not too eloquent attempt to point out the God-given privilege some fine fellows are passing up. From experience I know the theory of artificials to be absolutely sound and based on a firm foundation, but it is so difficult to be convincing on the cold impersonal printed page or by mere word of mouth. I shall never forget words of wisdom spoken by one of Harrisburg's top flight anglers late last autumn; displaying a photo of four smallmouth bass, all over three pounds and the choice of twelve taken in one afternoon, in effect he said: "I can take any reasonable minded fisherman with me for just two or three afternoons and convince him that artificials are the only thing to use." If you wonder why this fellow killed four big bass in one day—he didn't. Seldom does he eat a fish, but the nice ones are frequently photographed by odd companions with a small pocket kodak before release.

It is true your correspondent considers inroads upon already sparse forage as most lamentable, especially in view of the greater sport and indisputably fine results to be attained with artificials. In bygone years I have indulged my share of live bait angling —and secured the supply from fishable water at times. It was only as a convert to artificials that the full realization of the possibilities so thoughtlessly passed up became apparent. It was only when I began to appreciate there was a lot more fun using arti-

ficials; that more and bigger fish were coming my way. It was only then I awoke to the fact that I had been persistently robbing fish of their natural subsistence and in effect working against my own best interests. It was only then I realized middle age was at hand and my best years of fishing life had been thrown away, muddled around, wasted. It is a sad thing for man to start down the sunset trail with the realization he had something fine within easy grasp—with the wastefulness of youth threw it away—and now too late to ask for a new deal.

In the old days when I saw an artificial user with two or three nice fish, myself perhaps having half a dozen smaller and taken with a great deal more effort and less pleasure, I likely snickered in the thought the other guy was just a plain damn fool sucker; self-satisfied I knew he was just lucky. Only the proficient user of artificials can appreciate how much in error; how pathetically unfounded, such an illusion could have been. The skilled artificial man, properly equipped, should outscore other fishermen 2 to 1 over the course of a full season—if for no other reason simply because the former is more active, covers more water, and can reach out further without alarming the quarry, especially the raiding big bass furiously chasing minnows at eventide in the eight to twelve inches of water along the shore line. The visible artificial bag may sometimes contain only one or two nice fish, but there is a good and sufficient reason—somehow or other most fly and plug men quickly adopt the slogan: "If you would catch more, kill less". Such fellows seldom fish for food, but mostly only sport; some kill no fish at any time. The casting of fly or plug, the outwitting of nice fish becomes a matter of supreme pride and satisfaction, every bit so much so as the par round on the golf course. There is a strange affinity between fish and fisher; no one knows how the former may feel about the matter but certainly the latter quickly learns to love and respect the cunning and desperate courage of the finny warrior.

We are on trial; we, the Keystone anglers. We hold the future of old bronze back in the hollow of our hand. Which way will we turn? Will we send him along down the misty trail of those other vanishing or extinct Americans, the buffalo, the carrier pigeon, the wapiti, or shall we hold out the hand of good fellowship and bid that he tarry yet awhile? The decision rests in you and you and you. He's at your mercy.

DAVIS SPEAKER AT ADAMS DINNER

The social hall of Grace Lutheran church, Two Taverns, was filled to capacity when the fourth annual banquet of the Littlestown Fish and Game Association was held, at which time a turkey banquet was served. The president, Harry O. Harner, acted as the toastmaster.

The meeting was opened by the singing of "America" led by Rev. D. S. Kammerer and prayer offered by him also. The first speaker who was introduced was A. W. Rossiter from the Game Commission and the department of Lands and Refuges. George H. James, Sr., Warden for the Fish Commission and from Carlisle, was the second speaker who spoke on the number of trout and fish stocked. The third speaker was George Bretz of the game protection on special assignment of Adams County and spoke on the number of birds and animals stocked.

The main speaker for the evening was William J. Davis, Supervisor of Division "D" of the Game Commission and who spoke on different game and especially on wild turkey. Following his talk he showed motion pictures and explained them as they were shown.

The conclusion of the program consisted of chances chanced off for which awards were given to the following: Jack H. Crouse, fishing rod; Charles Trostle, fishing reel; George Motter, grill; Willis Snyder, thermos jug; Jos. Spalding, minnow bucket; George H. James, fish line; Clarence L. Schwartz, fishing tackle box; Charles E. Hofe, lure; L. B. Fink, lure; William Sneeringer, fish bait; and Orville Neuman, bait box.

HAPPY HOLLOW CLUB FORMED

Organized recently the Happy Hollow Rod and Gun Club met at the Belvedere Apartments in Harrisburg, to plan summer activities, with stress placed on small and large bore rifle shooting and clay targets.

The club has almost three acres of timberland, a mile and one-fourth north of Speeceville, along the Peters Mountain Road. Foremost of the club's activities now that spring is here to stay will be to lay out the rifle ranges and set up a trap house.

Twenty-six men form the nucleus of the club. Lester Hines is president. Other officers are Chester Murry, vice-president; G W. Riddle, treasurer, and George R. Shearer, Sr., secretary.

The next meeting is to be held at the clubhouse on their tract of land in the mountains.

One of the most ardent anglerettes in the state is Mrs. Ellen Dietrich of Philadelphia. She proudly displays two splendid largemouth bass which fell to her angling skill last season. Mrs. Dietrich is vitally interested in the conservation drive, being one of the most active club secretaries in the state.

'Tain't long afore bass fishin' time'll be here an' fer me the bass in our crick is the gamest fish we got hereabouts. We shure oughter figger on givin' 'em a brake rite erbout this time, fer I bin watchin' a ol' he-bass over his nest fer nigh onter three days now, an' you never seed a spunkier critter in yer life. Jest let a sucker er sum uther fish blunder close ter thet nest an' he's at it like a shot. Same goes fer enny thing thet falls on the nest, fer he carries it off in his mouth in a jiffy. Last year, near ez I cude tell, it tuke the bass eggs in our crick erbout six days ter hatch, an' I'm intrusted in seein' how long it taiks this yere.

Fer me, I'd like ter see our bass cricks an' the big river closed ter all fishin' frum erbout May 15 ter June 15, ennyway, an' I don't think menny fellers thet like their bass fishin' ud see it enny diffrunt. In the furst place, when a bass is over its nest, 'tain't no trick at all fer ter hook it. Ennything thet gets near, it'll hit, an' I noticed more'n oncet thet when a leetle stick er sumthin' else falls on the nest, the fish ud taik it in its mouth and carry it fer mebbe 3 er 4 feet, drop it an' then git back an' start afannin' the nest with its fins agin. It jest stands ter reezun thet ter drop even a bare hook on thet nest ud mean the fish ud do the saim thing. An' the cussed part erbout it all is thet oncet the ol' fish is tuke, 'tain't no time atall afore minnies, sunnies an' uther fish hes cleened up the eggs er leetle bass in the nest. No feller thet calls hisself a sport ud taik bass off the nest, but we jest got a few two laiged skunks thet'll do it an' all o' the bass fishers pays fer it in rite poor fishin'.

A feller kin git a heck of a kick out o' jest slippin' along a bass crick when spawnin' time cums an' watchin' the fish on the nest. Ef he does thet oncet or twicet, I reckon he'll git ter like them scrappy fish ez much ez I do. It's ded sartin' thet enny feller thet likes his bass fishin' oughter be on the lookout fer enny skunks thet'll taik bass off the nest this time o' yere an' not be too gentle in dealin' with 'em neither.

Minnows that are kept in a live box will thrive twice as long if the box is placed in fairly deep water instead of in shallow water close to the shore of lake or stream.

Question: Am planning to take up plug fishing with light plugs weighing one half ounce or under this year. Would you recommend same good finishes to secure?—A.J.S.

Answer: Included in the list are the perch finish, yellow perch finish, yellow body and red head, shiner finish, white body and red head and green scale finish.

Question: Could you give me some information relative to fishing for largemouth bass? The waters near my home are mostly lakes and ponds and smallmouth bass don't seem to be there, at least, I have never taken any or seen any taken.—J.D.

Answer: Generally, we have found fishing for largemouth bass in ponds and lakes as different from successful fishing for smallmouth bass of our streams as day and night. The simile is used advisedly, for the best largemouth fishing we ever had was at night in the dark of the moon. If a boat is available, it's generally a good plan to row as quietly as possible within easy casting range of the shoreline, dropping your casts with the plug as close to the water's edge as possible. Bigmouths tend to follow the shoreline shallows in their quest for food in darkness. Pet plugs with fishermen who angle for this fine game fish are usually larger than those employed so successfully in fishing for stream smallmouths, frequently weighing an ounce or better. Floaters are liked generally, the surface lures kicking up a commotion on the retrieve being often favored. In Lake Gordon, famous bigmouth water in Bedford County, jointed models of plugs have been found mighty effective on occasion. It is also a good plan to use a leader of synthetic gut, 15 pounds test, varying the length, according to water conditions prevailing, from 6 to 12 feet. The double barrel knot will be found effective in making the connection between leader and line.

Question: In fishing murky water or at night for trout, what color fly is believed to be most visible to the fish?—J.R.

Answer: The answer is black.

Question: What is the time required for trout eggs to hatch?—R.K.P.

Answer: That apparently depends upon the winter water temperature at the different hatcheries. At Huntsdale Hatchery in Cumberland County, where little variation is noted in water temperatures throughout the year, hatching time is usually in the neighborhood of 40 to 50 days.

Question: What type of bass forage is thought most frequently taken by the black bass?—J.S.

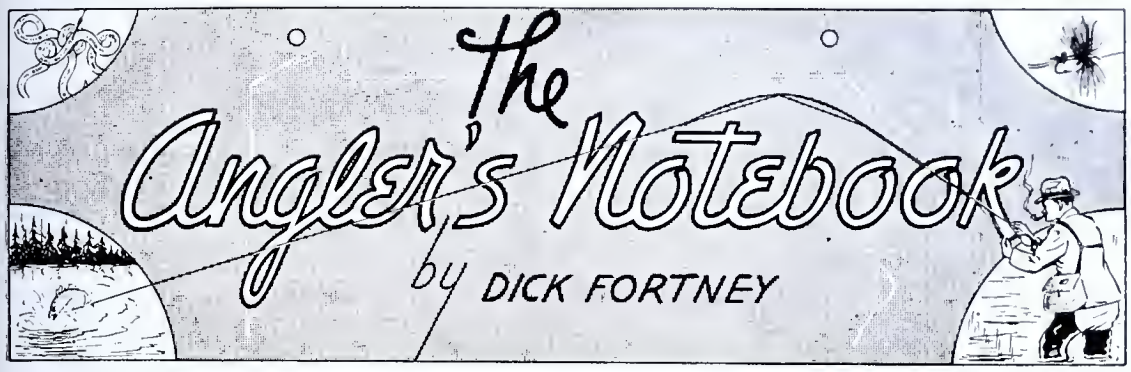
Answer: Examination of stomach contents of smallmouth bass taken during the past three years would indicate that the crayfish takes top ranking.

Question: What is a good way to keep minnows alive and in good condition in driving, say, a distance of thirty miles, to fishing water? —P.J.W.

Answer: Holding down the water temperature in the minnow bucket is important. The jolting in the car apparently aids in proper aeration of the water in the bucket. Place a good sized piece of ice in the water or on top of the bucket. If you want the minnows to be in ideal shape on reaching the stream, however, not more than 24 should be placed in the average minnow bucket. If icing is used, it is a good plan when reaching the stream to add a small amount of water from the stream or lake to be fished, repeating the operation at intervals until the temperature of the water in the bucket is approximately that of the water in stream or lake. This averts severe shock to the minnows and retains them in good condition. Finally, after fishing, you'll be helping the cause of more and bigger bass by releasing the bait fish in your pet water upon leaving. Chances are, if you tried to keep them, you might lose a good many that otherwise would be serving a mighty useful purpose.

Question: How can you best distinguish between the smallmouth bass and the largemouth bass?—T.W.

Answer: The largemouth bass is usually a basic green in color, with a dark lateral line extending through its midsection from base of gills to base of tail. The corner of the mouth will be found to extend well past the rear corner of the eye. A count of the scales on the gill cover will be found to approximate about 11 rows, perhaps the best method for quick identification of the species. Scales of the bigmouth are also larger than those of its smallmouth cousin. Dark green mottling over brassy or yellowish makes it fairly easy to distinguish this fish when it is laid side by side with a largemouth bass. A count of the rows of scales on the gill cover discloses that these smaller scales usually number about 17 rows. Frequently the base of the mouth of the smallmouth bass extends to about or slightly beyond the front corner of the eye. The species will also be found to incline more to slenderness than is the case with the largemouth bass.



If you want to be really fussy about your leaders, get some distilled water from your neighborhood garage and soak the gut in that. Also, keep them in a celluloid instead of a metal leader box. Some experts say that impurities in water and metallic contacts in the ordinary boxes for soaking are harmful to leaders.

To preserve a landing net, immerse it in linseed oil, shake it out, stretch it open, and dry it well.

After being used for several hours even the best fly line will become water-soaked, and in such a condition line dressing is of little value. The best plan is to strip the wet portion of the line off the reel and squeeze it or wipe it dry. Let it lie in an airy place, but not in the sun, and then with a new application of dressing it is ready for efficient service again.

Here is a foxy trick, Cast your flies on a patch of foam and allow them to lie quietly and to float with it, finally sinking through. That is what happens to insects that are caught in this manner, and fish know this fact. Often fish survey the bottoms of patches of foam in search of delicacies which they love.

For mid-summer trout fishing use sizes 12 and 14, or even 18, flies, either wet or dry, and the finest and longest leader you can safely and comfortably handle. Lighter lures and tackle make the least disturbance on low, clear water.

Vigorously rising trout often refuse to pay attention to a dry fly cast in their midst. In such a situation, try fishing with the smallest wet flies you have, say about sixteens.

If on a trout stream you come upon a low bridge that creates a dark, shady spot in the water, try there for trout. Fish loaf in just such places.

The very spots where the hook is likely to become snagged the easiest are the best hiding places for trout. Here the worm fisherman may test his tackle, his skill, and his patience. Around brush and roots and other obstructions the bait must go if the big fellows are to be tempted. Skill in manipulating the bait counts most, but the cautious soul may buy weedless hooks, which are less likely to get hung up because of the protecting guards over their points.

Wading shoes should have soles at least an inch thick and should be studded with hobnails to prevent slipping on the stream bed.

Jiggle a dry fly on the surface of the water close to or between lily pads if you want sport with bluegills and yellow perch.

Reflection of the sun on the water is painful and even dangerous to the human eyes. The effects are dizziness, headache, and a general dull feeling. Dark glasses are a sure preventative and are well worth the price you have to pay for them.

The men who have spent long winter evenings converting fur, feathers and steel into trout flies have had abundant opportunity to try out their creations. June and July, by the way, are fine months for the fly fisherman. The picture shows Howard T. Weaver of Williamsport busy at his home work table.

For scratches and other wounds made by fish suck well to remove any poison secretion that may be left in the wound, and then bandage with a cloth soaked in a solution of common salt and vinegar.

The evaporation method will keep freshly caught fish cool and fresh. Wrap the fish in a moistened cloth and the evaporation of the water will keep the temperature low.

When using a stone for a canoe anchor, a covering of burlap on the stone will save the bottom of the craft from being marred.

Never take a chance on fishing water where big trout are likely to be caught unless you are equipped with a landing net. A net costs little more than a dollar, but many a fine trout has escaped when a fisherman tried to lift it out of the water with his line or attempted to "horse" it roughly to shore.

The time to catch grasshoppers for bait is in the early morning, when the grass still is heavy with dew.

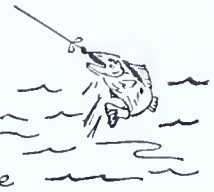
Trout fishing with minnows, when the water is clear, requires skill. If the water is deep, the minnows should be well sunk so that they spin better. In large streams the necks of pools, rapids, broken water, detached currents, and smooth and strong water at the foot of pools are in general the best places for angling.

White chubs, also called fallfish, are fine game for both natural and artificial baits. They take grasshoppers, crickets, worms, or grubs with savage strikes and are equally fond of trout flies. With natural bait the best way is to cast into a riffle and allow the current to carry the bait into a pool. White chubs also strike vigorously on combinations of flies and spinners.

Every angler who uses eyed dry flies has watched his finely tapered leader slowly disappear as pieces are nipped off to release the flies. Such shortening of the leader destroys its delicate action. The remedy is to attach leader points, which are fastened to the end of the leader and to which flies are tied. New leader points—costing about five cents each—can easily be added whenever necessary.

Reel screws sometimes work loose. To correct this trouble, withdraw the screw and insert a waxed thread to the bottom of the hole. Enter the screw beside the thread and about three-quarters of its length. Then cut off the projecting end of the thread close and turn the screw down to its head.

MIDDLE ATLANTIC ASSOCIATION OF CASTING CLUBS



An association of sportsmen's clubs formed to promote tournament casting, encourage organization among anglers assist in conservation; and support all moves toward true sportsmanship.

A meeting of the executive committee was held at the home of President Michel in Abington, Pa., on the 23rd of last month to make final arrangements for the annual tournament.

Chairman Arthur Clark of the membership committee reported that the Perkiomen Valley Sportsmen's Association had joined as a member club and would be represented at the tournament.

Willard Bowman, chairman of the Prize Committee, reported that in addition to the merchandise prizes that would be awarded by the handicap method in each event there would also be a championship medal awarded to the individual attaining the highest score in each event. Also the president's cup, donated by Mr. Michel would be awarded to the individual scoring the greatest number of points in all of the events.

Mr. Joseph Vandergrift has made arrangements with the Willow Grove Park management to provide a satisfactory court for Surf Casting directly adjacent to the lake in which the Plug and Fly casting will be held. Special parking arrangements have also been made for contestants and their friends convenient to the casting courts.

A general invitation has been extended to all sportsmen in the East to attend this tournament whether affiliated with member clubs or not, with the promise that they will be entertained by the pick of the amateur Surf, Fly, and Plug casters in this section of the country.

The date is June 9th, 1940—Willow Grove Park.

Branch Valley Fish, Game, and Forestry Association

Ever since the opening of the trout season the members have been so busy hunting for some of those trout that the Fish Commission have been stocking in the nearby streams that they have hardly had time to put in any casting practice. In spite of this, however, they will have a repreesntative group out at the Willow Grove Tournament.

Regular meetings are held each month at which interesting topics on outdoor life and sportsmanship in general are discussed. The 'spark plug' of this organization is Mr. Ray Betts who gives his address as Perkasie, Pa. Get in touch with him for information regarding the activities anticipated for the coming season.

Dover Fishing Club of Philadelphia

The next regular meeting of this club will be on June 19th, at the assembly rooms in the Bourse Building. The awards for the spring intraclub tournament originally scheduled for the May meeting will be made at this time. This will be the last meeting until September 18th and for the occasion Dave Mazzoni has secured an exceptionally entertaining picture called "Fishing for Giant Tuna". The picture will be shown through the courtesy of our fellow member Otto Henze. Otto, who is the president of the Penn Fishing Tackle Manufacturing Comuany, is himself an ardent Tuna fisherman and frequently reports a catch weighing up in the hundreds. Being a good sportsman, like all Dover members, he enjoys the battle and then, after bringing it to boat, photographs it and returns it to the water with a, "Thanks old boy! See ya tomorrow".

A representative group of plug casters and lead slingers were out at the Cedar Park Casting Field on May 12th to compete in the events at the spring intraclub tournament which is the opening gun of the season for the scientific casters. From now on throughout the summer the field will be reserved for casting practice each Wednesday night from 7:00 P. M. until dark.

Casting into the teeth of a strong headwind handicapped the contestants considerable, particularly in the Plug Distance event. Honors were made as follows: ⅝-oz. Plug Accuracy—First, Albert Freck, second, John Keeley; third, James Dye. Score 93. ⅝-oz. Plug Distance—First, John Keeley; second, Earl Clymer; third, Albert Freck; 147 feet. Surf (average of three)—First, Ralph Bowman; second, Willard Bowman; third, Harold Lentz, 454 feet 1 inch. Surf (longest of three)—First, Willard Bowman; second, Ralph Bowman; third, Richard Kunkle, 480 feet 10 inches.

Lower Merion Rod and Gun Club members take "time out" from practice for the events scheduled for their club's annual spring picnic and outing. Left to right, Linton H. Fish, Cynwyd, B. H. Jacobs, Philadelphia and Henry H. Hopkins, Narberth.

The trout fishermen of the club have unanimously agreed to cooperate with the request of the Pennsylvania Board of Fish Commissioners and decrease their limit to two trout for a day's catch and that only when the trout are exceptionally large and they are hungry for that particular delicacy.

Chairman Hankinson started the daylight saving season by taking ten of the members on a winter flounder trip to Forked River. The total catch was 45, mostly small ones, averaging about one pound each. On May 26th a general club outing was held at Reed's Beach on the Delaware Bay; a chartered fleet of bay cruisers took the party out to the vicinity of Brandywine Light where some excellent fishing was enjoyed.

The 1940 Prize Fish Contest is getting off to a good start with several record sized trout to say nothing of large bullhead catfish and suckers. Willard Bowman spent the week of May 13th surf fishing at Cape Hatteras and succeeded in getting several large channel bass.

For information regarding the Dover Fishing Club contact the secretary, Mr. Robert Morris, 2728 West Montgomery Ave., Phila.

Holmesburg Fish and Game Protective Association

On Sunday May 26th the association held its regular Spring Outing on the athletic field adjoining the club house at State Road and Pennypacker Street. A general invitation sent out to sportsmen in this section resulted in a record attendance. Visitors from a number of clubs throughout Philadelphia, Bucks, Montgomery, and Delaware Counties accepted invitations to compete in the events scheduled for the day.

Plug and Surf casting proved to be the popular sports and from 10:00 A. M. until late in the afternoon these courts were in continuous use. The club rifle range (one of the best in the county) was a big center of attraction, particularly with the fair sex, most of whom tried to prove that they were better shots than their husbands. They did.

Competitive events were held with small bore rifle and pistol. Trap shooting was also enjoyed.

Lansdale Sportsmen's Club

The Lansdale Sportsmen's Club is looking forward to a busy season in sports activities.

The Blue Springs Dam rebuilding project held up remarkably well considering the severity of the winter. Minor repairs only were necessary this spring to this dam. Good fishing is in prospect here, and all fishermen are cordially invited, according to William Stoneback, President of this club and President of the Montgomery Federation of Sportsmen's Clubs, and according to Ritner W. Tomlinson, Secretary of the Lansdale Sportsmen's Club. The location of this dam, its approaches, etc., make of it an excellent site for bait and fly casting. This club hopes in the near future

to conduct tournaments featuring such events here.

The Lansdale Sportsmen's Club holds membership in both the Montgomery County Federation of Sportsmen's Clubs and the Middle Atlantic Association of Casting Clubs. With the calendar already chalked up for their own activities as well as those offered by the Federation and the M. A. A. C. C., the members of this club are indeed anticipating a busy summer and fall season.

Lower Merion Rod and Gun Club

This club was grateful indeed for the large number of young trees and shrubs with which it was supplied recently from the nurseries of the Montgomery County Federation of Sportsmen's Clubs. Among the species were: oak, shellbark, hazlenut, persimmon, white pine, Scotch pine, Norway spruce and larch. These were planted, under the supervision of Henry Hopkins of Narberth, in the Lower Merion Township nurseries, where it is planned they will remain for approximately one year, after which it is intended they will be transplanted on ground in the township where they will provide food and cover for wildlife and, in a great many instances, prevent soil erosion as well.

Final plans are being prepared for the Annual Spring Outing of the Lower Merion Rod and Gun Club, to be held on the afternoon of Saturday, June 15th, on the Ridgway Farm at Bethayres. Club members and their friends are invited to attend and to participate in the various events scheduled for that afternoon, including: fly, bait and surf casting, pistol, rifle and trap shooting, water boiling contests and games of quoit, as well as "Bingo" for the ladies. A buffet supper will be served.

Members of this club have been practicing bait, fly and surf casting on two evenings each week in preparation for the casting events which will take place at the club's picnic, as well as for the Middle Atlantic Association of Casting Club's 1940 Tournament. A number of members of this club won prizes in the 1939 M. A. A. C. C. Tournament.

Montgomery County Fish and Game Protective Association

A big increase in the number of trout caught by members of this association indicates that the streams are clearing up and the outlook for the final month of the season looks better than it did at the start. A group of fly casters tried their luck on French Creek between Knaurtown and Poshtown just off of Route 100 and had little difficulty in taking their limit. Harry Fratt, George Uhrin, and Joseph Ulmer are busy coaching the boys in their casting anticipating the M. A. A. C. C. Tournament this month. The firm belief that a thorough knowledge of scientific casting wil pay dividends in the form of added pleasure to their favorite recreation has inspired the members of this club to get out and work.

For information regarding membership or any of the current activities sportsmen may contact Mr. Harry Fratt, 524 Kohn St., Norristown, Pa.

Pennsylvania Fish and Game Protective Association

The annual Father and Son Banquet was held at the Academy of Natural Science in Philadelphia on February 10th. Each son was presented with a fine split bamboo rod. Baseballs and bats autographed by "Connie Mack" of the Athletics were given to the boys as door prizes.

Secretary Michel, who is also president of the Middle Atlantic Association of Casting Clubs, announces the catch of a 23½ inch German Brown Trout. His slogan is, "Put 'em back and catch 'em tomorrow" but this one he kept.

The annual spring outing was held on May 8th at Valley Creek. Ten miles of trout stream were available to the fly casters who displayed keen competition in their endeavor to catch the largest fish. Plug casting, trapshooting, darts, quoits, and archery rounded out a very entertaining day for the members and their families who attended. President Nicholson introduced two very novel features that are seldom staged in this vicinity; a water boiling contest, and a bottle fishing contest.

Royersford Hunting and Fishing Association

Members of the Royersford Hunting and Fishing Association, too, have been busily planting trees and shrubs throughout their vicinity during the past spring months. These trees and shrubs were brought from the nurseries of the Montgomery County Federation of Sportsmen's Clubs by Donald Mair, Secretary of the Royersford Hunting and Fishing Association and Chairman of its Forestry Committee. Sportsmen of this club believe that the planting of these trees and shrubs along streams in their territory will greatly improve fishing and hunting in years to come.

Various members of this club, too, have been engaged in actual fishing on French Creek and other Montgomery County streams, while practicing for participation in the Middle Atlantic Association of Casting Club's 1940 Tournament. These members believe in combining casting practice with the actual sport of catching fish, and a number of members know some real good spots for both, according to Irvin R. Clemens, the President of this club. (Incidentally, Irv told the writer where there were trout—and the writer found trout there!)

Upper Providence Fish, Game and Forestry Association

The Upper Providence Fish, Game and Forestry Association, organized in 1936, now has a membership of eighty-five paid members, as well as a number of farmers and popular sportsmen who have been given honorary membership in the club. Monthly meetings are held throughout the year in their club house at Oaks, Pa. During the summer months the meetings are held outdoors and are generally followed by a corn roast or doggie roast. These outdoor gatherings have been instrumental in splendid turnouts at our meetings, according to the President of the club, R. Howard McFarland, Jr., who has served as president since the club organized. Other officers of the club are: Vice President, David R. P. Beynon; Secretary, Joseph Dietrick; and Treasurer, George H. Smith. The Trap committee, an active part of the club, holds trap shoots the second Saturday in the month. The location of their grounds, on the Beynon farm overlooking the Schuylkill Valley and the Valley Forge hills, makes it an ideal spot to spend an afternoon or evening.

Meetings are held the third Thursday night in the month, and an open invitation is extended by the president for sportsmen to attend any of their meetings. A recent addition to their equipment is the installation of a Mo-Skeeto trap, from which small bluerocks are thrown and shot at with special bore .22 cal. rifle shooting shot cartridges. This sport is becoming very popular among the members. The club also takes an active part in reforestration, stocking of game and fish, also educational programs among the schools relative to conservation work.

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Charles L. Jenkins of Narberth winning a water-boiling contest during a Lower Merion Rod and Gun Club picnic and outing held at Ridgway Farm, Bethayres.

Wissahickon Field and Stream Association

The regular June meeting of this club was held in Legion Hall at Ambler, Penna., on Thursday, June 6th. The importance of scientic casting as an aid to angling is fast becoming a recognized fact among most sportsmen's organizations and we have now added it to our many other activities. Members are getting together and practicing with their ⅝-oz. plugs and dry flies in anticipation of the M. A. A. C. Tournament on the 9th. Mr. John Michel, president of the association, was one of the guest speakers at the meeting on May 2nd. Contest casting was the subject of his talk and he painted a very clear word picture showing how the experienced caster could really get the maximum amount of sport while fishing.

We welcome Mr. Edwin M. Wright, well known sportsman and angler of Fort Washington, Pa., as a new member of this club.

Anyone desiring information about this club should contact the secretary, Mr. D. E. Biddle of Ambler, Pa.

THE BASS'RE BITIN'

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Then, poking under rocks and toward the left bank, he brought the poles together and up to the surface, lifting the net from the water. In the belly of the net, a half dozen prime minnows wriggled.

"There we are," Burke exclaimed. "The best bass bait in the world. Put three inches of water in the minnow bucket. There, that's enough. Now, while I hold the net over the bank, empty the minnows in the bucket. Watch out, they're slippery. But don't squeeze them too tight. That's fine."

Disgustful is the word.

The boys excitedly managed the transfer of the minnows from net to bucket. The operation was repeated from time to time until they had sixty minnows. However, exhausted by thrusting, shoving his way up the narrow stream through overhanging brush, drenched with water mingled with perspiration, a victim of persistent gnats, Burke sat down to rest, having had a thorough workout: "Gentlemen, that'll be enough minnows. Rest a minute. Then, we'll go back to camp and dig for worms. We might as well take time out to get a sufficient supply of bait."

Returning to camp, they removed the perforated cage inside of the minnow bucket and anchored it at the edge of the dam with a rope tied to a stump, thus providing circulating water to keep the minnows alive. Diagonally across the dam, a hundred yards beyond the overflow, Emory Bunyak lived with his wife and family in a solitary habitation on a neatly-kept little farm. Burke and his companions, taking with them several bait cans and the spade, walked around the dam to the Bunyak barnyard. Having obtained permission, they extracted therefrom a goodly supply of those lowly assistants of fishermen known as angleworms or garden hackle. After a friendly conversation with the Bunyaks, including an invitation to drop in at camp, Burke and the boys made their way back to comp, satisfied with the bait situation.

Spreading a blanket under the pine trees, Burke stretched out, yawning lazily: "You fellows can expect only two cooked meals at this camp, breakfast and supper, but they'll fill you to the neck. Lunch will actually be lunch, sandwiches, cheese, crackers, milk, olives, and the like. Must be getting close to noon. Not much use fishing now, in the middle of the day. Bass bite best in early morning or late evening, mostly in the morning as I've found. I'm going to take a nap. Waken me after a little, whenever you're hungry."

His companions rolled, wrestled, and tumbled on the bedding or wandered along the shore or through the woods, each following his own bent. Boz, the dog, cavorted around a while and then curled up near his master. The sun warmed. A gentle breeze softly moved the leaves. Insects hummed about. A sentinel crow called to his brethren. The lazy July day dulled the edge of life's harshness.

The sun had started down the western incline when Joe shook Burke, stating flatly: "We're hungry."

Jumping up, Burke looked at his watch. "Holy Smoke! After one o'clock. Slept nearly two hours. Well, how about a little help and we'll soon have a snack. Call Gib."

Lunch over, Burke suggested: "Bedding's been aired enough. Let's make the beds. Hang that clothing inside, too. Here, Joe and John, you put the food away. When you're through, you can help us. Come on, Gib, we'll start on the tent."

Those chores done, Burke asked: "Gentlemen, what do you want to do now?"

In unison, they declared: "Go fishing!"

"Okay," Burke grinned. "Joe, suppose you and John bring my fishing kit. Don't forget the creel. Gib, how about you gettting the rods? Let's walk down to that open space so we won't tangel in the trees."

Burke started to untie one of the rods. "Now, fellows, we have three bamboo rods and one steel. The bamboo rods are easily broken. Therefore, please be especialy careful in handling them. I prize this particular rod above all the others. Do you see this star above the handle? It is the distinguishing mark of a genuine lancewood rod, no longer manufactured and seldom seen anymore. This rod is about thirty-five years old. Originally, it belonged to an uncle of mine, one of the early pioneers in these parts. Gigantic in size, he lived to the age of ninety-eight years. Being an ardent fisherman, he endeavored to interest my father in the sport by giving him this rod. These two men, who had married sisters, often fished together. My uncle lived at Spruce Creek on what was once known as the 'Blue Juniata'.

"Spruce Creek, which flows into the Juniata River, is a good stream to this day. Some years ago, the State Fish Commission maintained a fish hatchery on Spruce Creek. While I do not know all the reasons for abandoning this hatchery, I understand one reason was the presence of carbon gas in the water which limited the number of fish that could be propagated by making necessary a great deal of water for each fish in order to provide enough oxygen. Last year I visited the Pleasant Gap hatchery near Fishermen's Paradise in the central part of the State. There, they have a device to remove the carbon gas from water. A pyramid of disks is constructed whereby the smallest disk is at the top with about five successively larger disks installed at intervals of twelve inches. The water is piped upward through the center of the disks and then cascades down over them, thus liberating the carbon gas from the water by aeration, contact with the air. By removing the carbon gas from the water in this way, the Pleasant Gap hatchery can now propagate more trout than all hatcheries in the state could handle twenty years ago."

Burke rubbed the joints of the rod along his nose, then in his hair. "To get back to this rod, my father left it to me. Naturally, it is a prized possession. You noticed that I rubbed the joints along my nose, then in my hair before putting them together? That's to put oil on the joints, making it easier to take apart. Don't need to worry about it pulling apart with a fish on. That wouldn't happen. It takes a straight pull to do the trick. When you have a fish on, the rod's bent. The joint pulls against itself. I reckon you fellows understand why I don't like others to fish with this rod. It can't be replaced."

Joining the rod together, Burke attached the reel, then threaded the line through the ferules, leaving about five feet of line extend beyond the last ferule. From his kit, he took an aluminum box which contained five leaders soaking between moistened pads of felt.

"Funny thing about these leaders," he said as he carefully uncoiled one. "When dry, their tensile strength is slight. They can be broken rather easily. When thoroughly soaked, they become surprisingly tough. Trout, at this time of year, are wary, easily alarmed. If we were going to fish for trout, we'd have to use seven to nine foot leaders, at least, and small flies. Elsewise, we wouldn't have a chance. Bass have plenty of intel-

ligence but we don't have to be so cautious about the length and size of leaders. Watch me closely, fellows, how I tie the line to the leader. You make a loop this way. Then, insert the end around and in that way. Now, we pull the line one way and the leader in the opposite direction. They're fastened together securely but the knot will come loose readily without cutting the line. It's a safe knot though. The harder a fish pulls against it, the tighter it gets."

Gib, Joe, and John displayed great interest in the rudiments of rigging a rod. Burke plucked a bass hook from his kit, continuing to comment: "Some folks are right fussy how they hitch hooks and flies to the leader, claiming that has a lot to do with catching fish. I don't know. Sometimes I think it does. Other times, I figure it doesn't. There's a powerful lot of hunches and superstitions and whatnot about fishing. I suppose they're right when you catch, wrong when you don't!"

Holding up the bass hook, Burke pointed: "This is known as a 'snelled' hook, meaning that a small piece of gut, six to ten inches long mostly, is knotted into the hook's eye with a loop at the other end of the gut which you slip over the loop at the end of the leader, then draw the hook through in this fashion, making a secure slip knot that can be loosened without cutting the leader. Some folks won't use snelled hooks or flies. They'd rather tie the leader direct to the hook or fly, their reason being that the snell and the extra knots frighten fish. Of course, that means snipping off a bit of the leader every time they change hooks or flies."

Burke carefully laid the completed job to one side on the ground, warning the others not to step on it. Reaching for the other rods, he resumed: "Well, there's one rod done. Now for the others. I'll do the job this time but, hereafter, each fellow must take care of his own rod. Watch closely. If you have any questions, speak up! I learned just the way you chaps are doing. Funny thing about fishing. It's taught me a lot about folks. Everybody doesn't think and feel alike and do things the same way. Each one is convinced more or less that his way is right, the only way, and who am I to judge?

"As you know," Burke went on, "I travel around various counties trying lawsuits. That's my business, how I make a living. Often, I have a little time in the early morning or late evening to fish an hour or two. Take fishing for trout with minnows, for example. Around here, its customary to thread the minnow on the leader and hook with a darning needle. In Tioga County, some fishermen push the leader's end loop through the minnow's mouth and out the rectum, attach the leader to a claw-hook, slide the minnow down the leader until the claws point upward with the minnow's tail resting between them. Then they fish downstream mostly in rapid water, in the ripples and the like, or twitching the minnow through the pools. Down in Cumberland County, where streams run deep and quiet, they wrap thin wire around a stick or finger a dozen times, making a sensitive coil. They fasten the line to one end of the coil and the hook to the other end, hook the minnow in the back at the dorsal fin or through the lips of the mouth. The frail, vibrating coil makes the minnow dart through the water, presenting an aggravating, toothsome, appetizing morsel to 'Sir Trout'. Folks in each of those sections think their way of fishing is the only method. Anybody who doesn't fish that way is a rank amateur, just doesn't know what it's all about. And they argue 'til the cows come home in defense of their style of fishing. Why argue with them? The point is, they all catch fish. Who can say which is right? So it is with various customs and practices in different parts of the country. I've just told you some real pay dirt, fellows, believe it or not. Well, the rods are rigged now. We're ready to bait up and try our luck."

Going down to the dam's edge, Burke pulled in the moored minnow bucket, baited the boys' lines, cast in for them and then sat down to watch. He got a lot of quiet amusement observing their tense figures, noting the changing expressions on their faces, listening to the chirps of hope, the moans of despair. The afternoon proved uniformly unsatisfactory. A few under-sized bass were caught and released again, Burke telling them to moisten their hands before grasping the fish gently to release it so as not to rub off its protective film against disease. They changed from minnows to worms with the idea of snagging sunfish and bluegills. There being a number of these fish in the dam, they had some rare sport before lengthening shadows warned them to make ready for the night.

With the assistance of Gib, Burke checked the lamp and stove for adequate gasoline supply. Closing the valves, they pumped air to the proper pressure. Lighting the primer in the stove, they warmed the intake before turning on the burners. While Burke cooked supper, Gib with the help of the others, started a wood fire in the improvised brick fireplace to burn the refuse and provide a cheery camp fire for later hours. While eating, Burke joked: "A fine lot of fishermen! Enough bass in that dam to feed a regiment and not a fish to grease the skillet. If we didn't have groceries on hand, we'd starve!"

That aroused Gib who had been sort of brooding, looking into space: "Dog-gone it, I'm sure I had a whopper just before we quit this afternoon. I could feel him. But, when I reeled in, he was gone. I'll show you tomorrow!"

"Okay, corporal, I'll be looking." Burke laughed. "I reckon I ought to be fair and tell you that the big ones hit mostly in the early morning, sometimes late at night. We didn't have bait this morning but we're all set for tomorrow. I'll go fishing the first thing in the morning, if you want to."

"Can John and I go too," Joe asked anxiously. "I like to fish."

"I do too," John hastened to add in his quiet, mannerly way. "I could stay out here all summer."

"Very well," Burke agreed, "we'll all go. Now, you lads snap into it and get ready for bed. That old sun'll come rolling out of the east before you know it."

Burke's advice was little needed because the day's activities had already clouded their eyes with sleep. They headed for the tent, followed by Burke who hung the lighted lamp in the tent, helped Joe and John disrobe, read the Bible, heard their prayers, and tucked them in the blankets. Meanwhile, Gib had piled some logs on the fire, pulled up two chairs, perched himself comfortably and, in reverie, gazed at the fire-made pictures, sparks and curling smoke columns vanishing through the trees toward the moon.

"Come on out to the fire, Dad," Gib called.

"Be with you in a minute, pal," Burke answered, taking a last look at Joe and John, now trustingly fast asleep, to see if they were covered.

He strode from the tent to fire and sat down. Boz stepped quietly to his side, laid his wise old head on Burke's knee, and sighed with contentment. Burke glanced inquiringly at Gib. The boy, now slouched down in his chair with feet cocked on the unburning end of a log, continued to gaze into the fire, did not speak. Words were intruders; they just didn't belong. Burke looked overhead at the pale moon drifting imperceptibly but steadily onward, as if with measured tread, into eternity. So it was with man. An occasional

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All set and waiting for the strike.

bullfrog conked. Now and then, a whippoorwill uttered its quaint cry. The sounds of the night played a soothing symphony. An indescribable peace enfolded the earth. Nature rested. Man and boy silently communed with each other and the good earth. With a rising lump in his throat, his eyes a bit dampened, Burke reflected upon a line from an old poem: "Men get real close to God's design out fishin'". Temporarily, he reveled in what he thought was akin to Heaven. During lonesome hours which his daily work forced upon him, he would live over again and again these few precious moments, drawing from them strength and courage to go on.

"It's grand, isn't it Dad," Gib said softly with his magnetic boyish smile.

"Yes, old pal, it is truly grand," Burke affirmed slowly. "I think you glimpse tonight why I slip away into the woods from time to time. Hunting and fishing are the excuses. The real reason is what you now feel, what you are now thinking! Don't try to tell me, dont' try to capture it in words. I doubt if you can. I know I cannot. Words seem too small or else I don't know the right words. Here, tonight, we dwell in the real world. In this hour, only fundamental things count, shelter, food, raiment, the Almighty in his matchless providence, eternity. The everyday world with its cheapness and littleness seems so far, far away and unimportant. But, soon it will return and we, you and I, all of us, must run our humble course through it like men but with our spirits just a bit more tranquil for having been here tonight."

They both lapsed into silence. The fire burned low. The night breeze freshened through the trees, fanning the embers into a momentary revival. With unspoken accord, they made their way to the tent. Preparing for bed, they knelt for a moment, bade each other goodnight. Then, Gib snuggled the covers about him while Burke turned off the valve of the lamp and did likewise. Boz arranged himself at the foot of the cots. Together, they watched the lamp die. Darkness marked the close of the camp for the night.

At the first grey of dawn, little Joe nudged his father until Burke awakened. "Come on, Dad, let's go fishing. You said the big ones would bite early in the morning. Ssh, don't waken the others. Just you and I!"

Once awake, Burke just couldn't resist. Without disturbing Gib and John, the two conspirators slipped out of the tent. Taking Joe's rod from its resting place against the tent's side, Burke headed for the dam, motioning Joe to follow him. The lad's outfit deserves description. A rod costing ninety-five cents, an antiquated reel holding an old frayed line, and a used trout hook constituted a prized possession. Pulling in the minnow bucket anchored to a stump, Burke selected a four-inch minnow, hooked it through the lips and, walking out on a point, cast the minnow about ten feet from shore.

Easing the line a bit, Burke told Joe that, if a fish hit the bait, he should let the line run out freely because, ordinarily, a bass seizes the minnow from the side, runs with it about twenty yards, then turns it before swallowing the minnow head first, the time to strike and set the hook being when the bass moves after the pause because the hook is then in position to snag the fish and hold it. Burke heard Gib and John calling him. Opening their eyes to find the others gone, they rushed from the tent, saw Joe fishing, and set up a clamor, eager to try their luck. Burke had taken a few steps toward them when Joe let out a yell: "Hey, Dad, look quick! The line's going out! What'll I do?"

Sure enough, the line was forty yards from the shore and going steadily. Burke surmised that the fish, undoubtedly a bass, had swallowed the bait in one gulp, not bothering to turn it or being too hungry to do so, which occasionally happens. Striking would immediately determine the true situation. If the fish had not swallowed the minnow but had caught it from the side preparatory to turning it, the bait would pull out of its mouth and the fish would be lost. Dashing toward Joe, Burke shouted:

"Give your rod a quick jerk. Then, hold'er steady. I'm coming!"

Joe, his hat awry, his chubby fists clenching the rod, his mouth open and eyes popping, obeyed instructions by bracing his feet and heaving backward. The reel screamed. The line headed toward the breast of the dam. Burke leaned over Joe's shoulder to put some drag on the reel, fearful that the line might break but knowing that the bass must be stopped before it tore the line's end from the reel. Finaly, the bass halted.

"Now, Joe," counselled Burke, not too calm and collected. "Keep cool, don't get excited, and maybe we can land this fellow. Feels like a whale. Keep the butt of the pole in your stomach, hold your left hand above the reel but not binding the line. With your right hand wind in your line but the instant you feel the bass going again, give him his head. When he stops, reel in again. There he goes! Don't try to stop him. It wouldn't take much to break that old line. Gee whiz! I wish we had him on a new line. And that old trout hook's nothing to brag about either. He's stopped. Reel in some more but be ready to let go if he starts. At-a-boy! Doing fine, Joe. Keep going!"

In wild excitement, Gib and John raced out on the point, followed by Boz, barking furiously. Burke, nervous and jittery, first hoped, then despaired, then hoped again, dreading the disappointment the loss of the fish would mean. Joe struggled manfully at his job. The bass surged up and down the dam, losing line to Joe with every maneuver. Finally, the shortening line brought the bass, exhausted and spent, to the one surrender nature permits. Burke slid down into the water, scooped with a landing net, and scrambled up the bank, fearful that the net might break. Following down the line, he gripped at the gills, and held the bass at arm's length.

"Wow, at least fifteen inches," he exulted. "Your first bass, Joe! What a beauty! How'd it feel, pal?"

"Boy, oh, boy. I caught him. He's mine," Joe chortled, grinning from ear to ear, showing two big front teeth flanked by blank spaces. "Look, Gib, he's a great big one. Ouch, my arm's sore, and this hand hurts, too."

He raised his hand which had a blister on the thumb, unnoticed in the turmoil of the duel. Chattering, whooping, the four celebrated the conquest, the victory. Enthralled with the scene, Burke, suddenly throwing back his head, laughed and laughed. At that early hour of the morning, when the mist begins to rise and dissolve and the water looks oily in its undulating smoothness, a small boy, eight years of age, with equipment worth less than three dollars, an old reel, frayed line, puny trout hook, ninety-five cent rod, had caught a fifteen inch bass which he now closely guarded as the most important possession in the world. Many mature fishermen, spending a goodly sum of money for fishing equipment and traveling expenses to the upper reaches of the Allegheny River and northern lakes, would gladly have paid cash money for that fifteen inch bass to exhibit as a trophy.

Gib, looking thoughtful and determined, edged away and was soon at the minnow bucket with his rod. Hooking on a minnow, he swung it out from shore and gently dropped it in the water, easing off his line and staring intently. Unbeknown to Gib, Burke, with a twinkle in his eye, came and stood behind him, waiting. Soon, the line jerked, then cut through the water toward the middle of the dam. The turning reel stopped, then started to revolve again. At this moment, Gib struck, set the hook firmly and, after ten thrilling minutes, landed a prime fourteen inch bass, Joe reminding him, however, that he had the champion bass. Gib retorted that he landed his own fish, without help. John soon wet his line and was rewarded with two fine bass during the next half hour although the three fishermen suffered many disappointing experiences, stolen bait, snagged hooks, broken lines, lost fish after heart-thumping struggles.

Meanwhile, Burke busied himself getting breakfast. Action slackened as the sun rose, strikes became infrequent, and the three youthful 'Isaac Waltons' suddenly discovered that they had a real appetite when Burke called them to the table. After an ample meal, they policed the camp in regular order, airing blankets and clothing. However, the exhilirating sensation of a fighting fish at the end of a line, so recently experienced, could not be longer ignored.

'Let's go fishing," they all chorused to Burke.

Burke took one look at their eager faces, knew he could not refuse, and, in fact, wanted to go fishing himself. "Hmm, I guess everything's shipshape. Well, come on! You fellows fed a lot of minnows to those fish this morning. There aren't many left. But, we'll take them along. Let's try the breast of the dam. Might as well bring that can of worms. Don't think the bass'll pay much attention to us. Getting too warm for them. The sunfish and bluegills ought to go for worms, though. Might as well take Boz along."

Presently, a nondescript caravan moved away from camp and down the trail. Garbed in various degrees of disorder, laden with rods, bait cans, minnow bucket, creel, they fairly exuded comfort, real companionship, and contentment. Gib halted abruptly, pointing: "Look at the fish nest!"

In the shallow water along the shore, a sunfish had made a depression two feet in diameter, bounded by a well-defined retaining wall two inches high to protect the eggs. Over the nest, the sunfish patrolled back and forth, attacking viciously any foreign substance or creature that intruded.

"You will find more nests along the shore," Burke remarked. "I saw two near the point

where Joe caught his bass this morning. A sunfish won't eat its young but a bass will. A year or so ago, I had the opportunity of spending a day at the Bellefonte hatchery where they rear not only trout, but also bass, both large and smallmouth. Trout require colder water than bass, especially largemouth bass. In the bottom bordering Spring Creek, a system of canals and ponds have been constructed extending over a half mile in length. At the head of the project, several large shallow dams imprison water diverted from Spring Creek. A spring-fed trout stream, the Spring Creek water is too cold for best results raising bass. By spreading the water over a large area to a depth of two to three feet, the sun warms it to the right temperature. This warm water flows from the dams into a canal flanking the project on one side. A similar canal on the other side carries the original cold water from Spring Creek. Between the two canals, successive pools or ponds have interlocking pipes so that they may be served with either cold or warmed water, depending whether trout or bass have been planted. One pool may contain cold water while warmed water is in the neighboring pond."

"But, I started to tell you about bass eating their young," Burke said, bringing himself back to his original subject. "While at this Spring Creek project, I saw several dozen poles protruding from the water here and there in the shallow dams. Upon inquiry, they told me they used the shallow dams for brood bass and that the poles marked bass nests. It seems that the male bass makes a nest, similar to that sunfish nest, in which the female lays the eggs. That completes her job. In fact, the male bass drives her away from the nest and eggs, fertilizes the eggs, and guards the nest until the young bass, called 'fry' are born, emerge from the egg cells, somewhat like a chick from an egg, only under water. The old male bass still has work to do. He continues to guard the young fry from enemies by keeping them swimming in a compact circle above the nest while he wards off any hostile fish. Eventually, the young fry will break from the circle to scatter and make a living for themselves. Whenever they desert the circle, the old male bass reverts to type and, being carnivorous, eats his own young. Only those who escape his massive jaws have a chance to live and mature, grow up. The caretakers watch each nest daily and, when the time for the young fry to break circle is about due, they net the old male bass and remove him from the dam so he cannot eat the young bass, which are also trasferred to their own rearing pond. What do you suppose young bass eat, gentlemen?"

"Worms, bugs," John suggested.

"I saw a picture at the movies once showing men feeding fish spoonfuls of stuff out of a bucket," Joe offered.

"Well, you both are part right and part wrong," Burk said. "Young trout will immediately eat prepared food but bass fry will not. The first food of a young bass is a tiny aquatic bug called 'daphnia'. After experimenting a long time, the man in charge of fish propagation, fish raising, in our state learned how to breed and raise daphnia in large quantities to feed bass fry. Daphnia is an important food for bass when they first break the circle. However, the supply of daphnia is naturally limited. The young bass must be taught to eat prepared food which is more easily obtainable. Immediately after transfer to ponds, caretakers at the hatchery scatter on the surface of the pond spoonfuls of ground dried fish, boiled eggs, liver, and other ingredients, mixed together and screened through a small mesh. These caretakers sometimes become much upset temporarily in their earnest endeavor every hour or so for many days inducing the fry to commence eating this unnatural but necessary food. Nothing delights these men more than success in their efforts. Few of us realize how much time, patience, and work is required to raise fish. Well, we'd better be getting along."

Coming to the gate, they turned to the right, crossed the foot bridge spanning the dam's splash. The breast extended some seventy yards from the splash to the overflow which merged into the other bank and at which point a fishway had been built for spawning fish to ascend and descend the stream flowing through the dam. An occasional tree on the breast provided spots of

Target shooting was popular with the boys.

shade from the midday sun. Choosing an open space, Burke, tying on a fly, amused himself casting for a while. Young John proved to be the most energetic and persistent fisherman in the party. What he lacked in skill, he recompensed with dogged perseverence. The supply of minnows quickly disappeared, John accounting for most of them by insisting upon trying to cast a minnow over his head, imitating Burke casting a fly. To John's great disgust, the minnows seemed determined to flip off the hook back of him or else fly free into the dam, a safe meal for nonchalant, derisive bass.

Although each fish caught brought forth a many-toothed, dimpled grin on John's face, his main objective apparently was just fishing, perpetually going through the motions baiting the hook, dunking it in the water paying out line, letting fish steal the bait, now and then catching an unwary fish, reeling in the barren hook mostly, then a repetition of the same procedure, time and time again, the actual capture of fish really being incidental. Not only did he empty the minnow bucket, but he made such inroads on the worm supply that he forced Burke to divide the remaining worms equally. John soon exhausted his share, forlornly appealing that he had no more bait. Stumped for a minute, Burke studied the problem, nodded affirmatively, walked to camp, returned with several strips of bacon, and firmly looped one back and forth on John's hook. Grateful, John thanked him and placidly, doggedly resumed fishing, perhaps wondering a bit why he failed thereafter to catch anything but, still, he was fishing and happy. Thus, John averted the lost, gone feeling of 'no bait'. No doubt, the fish marveled at the resistance of the bacon bait, too large to swallowed in one gulp, too tough and firmly attached to be stripped from the hook.

Boz loped up and down the breast, darting aside frequently to nose through the weeds, following some scent remembered from hunting season, faint in summertime and confusedly intermingled with numerous growing odors which pass away with the first frost. His initial fishing expedition, undoubtedly Boz did not comprehend the peculiar antics of his master and his companions, but he amused himself in his own fashion while waiting for developments. Gib lifted his line, growled at the missing bait, retrieved his hook, continuing to mutter crossly at the iniquity of bait-stealing fish. Laying rod on the bank, he was intent on the job of impaling a wriggling worm when Boz loped past, became tangled in the line, pulled it taut, and drove the hook into the boy's finger. His face puckered by pain, Gib howled:

"Ouch! Consarn you, Boz. Dad, the hook's in my finger! Quick!"

"Boz, whoa! Down!" Burke alarmed, bellowed sharply, leaping to his feet and running to Gib. "Steady, Boz. Hold still, Gib. Grab the line above the hook."

"Hurry, Dad! It hurts," Gib cried, tears coursing down his flushed cheeks.

Burke released Boz, heaving him aside where he cowered, bewildered, eyes apologetic, expression abject, thoroughly aware that he was in disgrace for some reason which he, of course, did not understand. A queer business, this fishing! Burke sharply ordered:

"Don't move, Gib. I know it hurts but hold that hand steady! Don't move. Here, let me see it."

Fortunately, although the hook's point had been driven into the flesh, the barb remained clear. Winding the line around his foot several times to prevent a recurrence with possibly more serious results, Burke maintained a firm grasp of Gib's finger while he gently withdrew the point of the hook.

"There we are," he comforted. "Out as clean as a whistle. Lucky it didn't go in past the barb. That would have been real trouble. The only thing to do in a case like that is to cut the barb out with a knife. The first thing you do is hustle to camp and put some iodine on that wound. Always disinfect any wound immediately, if possible. Even sucking the blood is better than nothing. Let's all head for camp. I'm tired fishing. Getting hungry, too. Aren't you?"

The near-tragedy had cooled their zest for fishing. Willingly, they retraced their steps to camp. After treating the several cuts and abrasions sustained in the morning's fishing, Burke announced: "I knew we're all hungry but, before we eat, we'll take a bath."

"Bath!" they exclaimed, astonished, and with perhaps a degree of natural, boyish repugnance. "We wash night and morning. Why take a bath. We don't need it! Where'd we take it, if we did?"

"What's the matter with the dam?" Burke, laughing, demanded. "Ought to be enough water, maybe!"

"Aw, gee, we don't want a bath," they moaned.

(Please turn Page)

"Well, you're going to get it, anyhow," Burke declared, firm but chuckling. "Out of those clothes, rascals. Come on. Strip or I'll do the job for you. And I can do it! Do you think I can't? Another thing, every one of you I have to undress will be ducked personally by me, soundly and completely. Step lively if you don't want a ducking!"

Finding no mercy in Burke's eyes, they, reluctantly and with great deliberation, peeled off first one garment, then another, until they stood on the bank of the dam, stripped stark naked. Their lowered brows and curved-down mouths betrayed their extreme displeasure. Armed with soap, towels, and a bucket, Burke proceeded to the task.

"I'm a little fearful of the depth and bottom of this dam," he said. "So, you gentlemen just step down into the shallow water along the shore there and we'll begin to commence."

Selecting Gib as the first subject, Burke filled the bucket and emptied it over his head. Sputtering, gurgling, remonstrating, he danced around, shivering from the impact of the cold water. Burke quickly soaped him, stem and stern, fore and aft. Rinsing him with several buckets of water, Burke gave him a vigorous rubdown with a towel, tossing it to him with instructions to finish drying himself while Burke turned his attention to the other two mournful victims.

Hearing voices from the directions of the Bunyak farmhouse, Burke glanced diagonally down the dam and saw the Bunyak family, parents and children, some three hundred yards away, sitting in a half circle in front of their home, enjoying the spectacle with evident pleasure, especially the lamentations and outcries of the unwilling victims.

Still a bit resentful but with appetites spurred by the bath, they sailed into the noonday lunch and consumed prodigious amounts of food. Across the dam, a dozen stumps projected six inches to a foot above the waterline. After lunch, Gib unlimbered his .22 rifle and tested his marksmanship. No novice, Gib had already earned several badges and medals in rifle shooting. These water targets toward the other side of the dam had several advantages over land targets. Showers of spray instantly told the story of a miss, whether the aim was high or low, to the left or to the right. A hit registered with a resounding plunk, like a blow with a club on a hollow, rotten log. Gib challenged Burke to a contest, three shots from the standing, kneeling, sitting, and prone positions. To Burke's amazement and delight, Gib not only held him even but made a better score.

With desire, Joe watched them intently. Finally, he tugged at Burke's sleeve: "Please, Dad, may I shoot?"

"Sure thing, pal," Burke replied. "But, first, we must talk guns a little. You've helped me clean guns at home. You know how to handle them properly but we'll just review the matter of guns again. Every gun is loaded and must be handled accordingly until a careful examination is made. Always keep the muzzle pointed to the ground or in the air, away from all companions. Do not fire unless you are certain at what you are shooting. Never take a chance. That's that. Hold the rifle in this manner. Take a few deep breaths. Hold your breath while aiming to prevent the muscular movement of breathing from causing the rifle to waver. Don't jerk or pull the trigger. Keep your sights lined on the target while you squeeze the trigger gradually so that you do not know exactly when the trigger releases the firing pin. Do you understand?

"Yep. Now, let me shoot."

His short arms struggled with the long rifle. Finally, propping his back against a tree, Joe fired three shots, the first splashing in front of the target. Raising his aim slightly, Joe had the satisfaction of plunking the other two into the target.

That night, they had a grand meal, tomato juice, fried bass, boiled potatoes, lettuce, bread, butter, peanut butter, olives, pickels, and celery. After the remains of the meal had been cleared away, dishes washed, gasoline lamp inspected and filled, fresh drinking water brought from the spring, equipment and supplies put to place, they sprawled around the camp fire, convening another unforgetable woodland lodge. They joked, recounted the events of the day, told stories, sang songs. After a while, Burke said:

"I promised you gentlement that I would tell you something about this dam. Five years ago, a man from the Fish Commission and I tested Yellow Creek, into which this stream flows about two miles down the valley, to determine whether or not it was sufficiently free of pollution to hold trout. Of course, in making this test, we had to check the tributaries for pollution, which caused us to ascend this particular stream. The dam, as you see it, did not exist at that time. However, we found the remains of an old log dam used in lumbering days. The splash had been washed away. Only the earthen breast still stood. Thick brush grew in the body of the dam, through which meandered a stream containing a good volume of pure water. I thought to myself, what a wonderful site for a dam and a cabin! I sort of hoped I could buy it some day."

Burke paused to put a log on the fire which showered sparks upward. "The following year, several of my friends from Clymer, who had also been in the Army during the World War, asked be to join their hunting and fishing club. They said they had a dam in Pine Township which they intended to stock with fish and that the hunting was good. At their suggestion, I drove with them to look at the place, not suspecting the truth. Well, gentlemen, I'll be switched if these friends hadn't bought my pet dam site, cut away the brush, installed a stone splash, and made a real dam, along which you are now camping. I sure joined the club right then and there. We've been making improvements since that time although I am not able to spend as much time as some of the others. We bought six brood bass, big ones. Every time a coal company dam in this vicinity is emptied for the purpose of cleaning it, some of our members are right on the job with truck and barrels and obtain a lot of fish free. In this way, we have planted a lot of fish in this dam. During the first three years, we prohibited fishing. Now, we have an elegant dam in a garden spot which, properly managed, should give us rare sport for years to come. We're thinking of building a cabin right back of the tent. What do you think of the idea? Would you rather camp in a cabin or in a tent?"

"Me, I'd rather be in a tent," Gib declared stoutly, "I like to rough it."

"Yeh, tough guy," Joe scoffed. "What'd you do if a big rainstorm blew the tent down and everything got wet?"

"I'd get along all right," Gib retorted confidently. "I can take it!"

"Humpf," Joe snorted. "You just . . ."

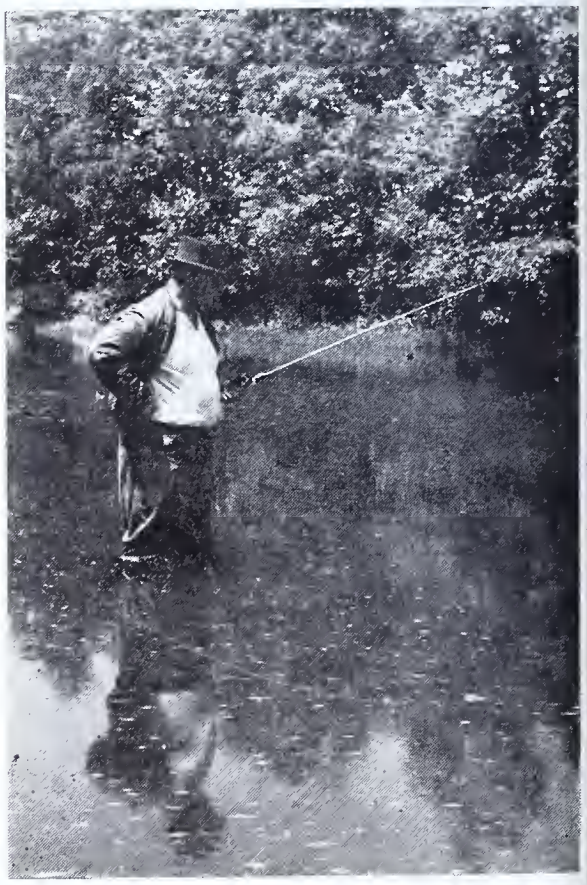
"All right, all right," Burke interrupted, yawning. "Finish that argument in the morning. I'm going to hit the hay. Let's go."

In a few minutes, the light flickered out, placing the seal of darkness on another day of green memory. The few alloted days dreamed by, all too rapidly. They idled about the dam, hooked forty-seven legal size bass, took ten which they ate, occasionally drove to a nearby village to telephone home and replenish supplies. Time seemed unimportant. Abruptly, the day of departure arrived, a dismal dawn. With sorrow and regret, they struck tent, packed, disconsolately drove home, stowed away the tent, gear, and equipment, mourned the end of their late treasured pilgrimage afield and astream, and yearned to be gone again.

HALFWAY DAM ATTRACTS ANGLERS

Halfway Dam in Union County was crowded with fishermen late in April, seeking trout which were cought in large numbers. Despite the fact that the Fourteen Mile Narrows road is in bad shape, from three different sections which were damaged during the winter, several hundred fishermen reached the dam to try their luck.

Sunday was the first "nice" fishing day since the trout season opened and streams and creeks were also lined with fishermen. Catches were relatively good.



In the opinion of Sam Shearer, popular teacher at the Lewistown high school, fishing the flats of Tuscarora Creek for its fighting smallmouth bass is sport supreme.

BASS LIKE TROUT

(Continued from Page 11)

⅜ ounce. A floater, it can be cast with a minimum of disturbance and can be used to good advantage in fishing weedy stream sections. (3) The Heddon Jointed River Runt, weighing about ½ ounce, a slow sinker with deceptive action (shiner finish); (4) The Fish-O-Bite, weight ½ ounce, shiner or perch finish, a slow sinker and wobbler made by South Bend Bait Company; (5) The Shakespeare Midget, weight ½ ounce, yellow perch and shiner finish, a straight running little lure, with propellers fore and aft. (This plug is a more effective hooker if the small rear treble hook is replaced with a longer shanked bronze double hook. Yellow finish with red head is also a good finish in this lure). (6) Lightest lure in the group, weighing ¼ ounce, is the Daredevle Imp made by Lou Eppinger. This spoon is a sweet caster, coming through in different finishes, the green scale finish being preferred by the writer. It is equipped with a single hook and bucktail and, of course, must be used in conjunction with a snap swivel. (7) Mack's Minnow Bug, weighing ⅜ ounce, a rapid sinker equipped with a single hook and spinner, can be cast like a bullet and ranks as an excellent bait for our smallmouths. Finishes preferred, yellow and black. In answer to a number of inquiries, the lure may be obtained by writing to The Tackle Shop, 711 Third Street, New Cumberland, Pa. (8) A pet in the writer's light lure kit is the Midg-Oreno, weight ⅜ ounce, made by South Bend Bait Company. This little lure is a floater, but when the retrieve is started it darts beneath the surface, running in a tantalizing wobbling manner at a depth of from two to three feet. During the past two seasons, it has been our most consistent strike enticer and the small bronze treble hooks with which it is equipped are excellent hookers. Finishes preferred are the perch and shiner scale.

Having acquired the outfit, the problem now centers on fishing it most effectively. It will be found, in making casts with the light lure, that its effectiveness is greatly increased if the rod tip is raised rather sharply when the lure in its downward arc is at a point about eight feet above the surface of the water. This stalls the forward momentum of the plug, causing it to strike the surface with a slight splat that apparently is highly appealing to the creek smallmouth.

In one notable respect, the light bait casting outfit is decidedly superior to the flyrod assembly. Casts with the light lures of from 80 to 100 feet are easily attainable and under clear, low water conditions, this constitutes a definite advantage for the bait caster. To reach a good fish that has just wallowed into the shoreline shallows 80 or 90 feet distant in pursuit of minnows, without the necessity of a closer approach, often spells action from bass well up in the poundage rating.

Smallmouth bass in the creeks of central Pennsylvania have usually completed the spawning act by June 15. The male fish, during its prolonged vigil over the eggs and young has acquired a keen appetite by that time and is extremely active in foraging after leaving the nest. Activity of both the female and male fish apparently extends well into July, and early season bass fishing is consequently good in clear or clearing water, A lapse in this foraging activity seems to come with the so-called "dog days" and is resumed when cool September nights tend to drop water temperatures in many of our warm water creeks.

Shiners rank as good bass forage. Use artificials and save this vital food supply.

Real satisfaction is in store for the fishermen this year who take up the fascinating sport of fishing artificials on either the casting rod or fly rod. To place one of those baby casting lures lightly into a weed-fringed pocket, see the spiked dorsal fin of a good smallmouth cutting the water and feel the light rod vibrate to a vicious strike comes the nearest thing to "hunting with fishing tackle" that we know. You'll cover a lot of water in a day and, more important, you'll have a whale of a lot of thrills doing it, with incomparable anticipation that each cast may tie you into a hefty creek smallmouth bass, the gamest freshwater fish that flaunts a fin.

Give it a try for more tight lines.

BASS LURES

(Continued from Page 4)

this bait especially the black plunker among the Florida largemouths, and it works well in our own waters too, providing one gets it in the smaller sizes.

Another lure that came up from the southland, is the plug illustrated in Fig. 9. In southern Delaware, where the largemouths grow very heavy, this bait has gained an enviable reputation as a taker of big fish. In appearance the plug is a radical departure from the orthodox type. Between the joints is located a revolving propeller blade which causes little ripples to be set up as the bait is slowly pulled along over the surface. Gliding across the water, it reminds one of a mouse trying to reach land, and the tantalizing furrow left in its wake is undoubtedly one factor that contributes materially to its outstanding success.

While this article is being written, I am many miles from home and not having the above mentioned plug with me, I have sketched it up mainly from memory. The body is yellow, sprinkled with aluminum spots and while the sketch may be highly inaccurate, especially as regards to the number and position of the hooks, yet I believe that it is sufficiently well described to enable one to recognize it at the tackle stores.

Underwater Plugs

A few of the best of the underwater plugs are the Baby Jointed Pikie Minnow, Fig. 11; the Pumpkinseed, Fig. 12; and the Midget Dingbat, Fig. 13. These small one half ounce lures are unusually successful in streams and rivers, and one can expect to catch almost any type of fish on them. I may be more or less prejudiced, but I have a strong preference for the Midget Dingbat, and with it I have taken rainbow trout, bass, pickerel, fallfish, perch, and walleyed pike. All the above lures, however, are excellent, and if procured in a variety of colors, success cannot help but be certain.

"Now I want you to tell me which of these words are singular and which are plural. Rembert, you take the first, 'trousers'."

Rembert (after lengthy deliberation): "Singular at the top and plural lower down."

A proud parent called up the newspaper and reported the birth of twins. The girl at the desk didn't quite catch the message over the phone. "Will you repeat that?" she asked.

"Not if I can help it," was the reply.

FLY ROD BASS FISHING

(Continued from Page 13)

length from 7½′ to 8′-3″ if you want the maximum in ease and casting efficiency. The man don't live who can swing the tip of a long, heavy or limber rod as swiftly as he can swing the type of rod I've been recommending—and remember that it's tip speed that counts, tip speed and the *ease of attaining it.*

Now you are not going to get the kind of rod I have in mind at Ginsbergs Department Store. The chances are 100 to 1 that you won't even get it at your tackle store. You will have to order it. The dealers carry advertised tackle and popularly priced tackle. The rod I have in mind will cost you from $42.50 in solid butt up to $65.00 in hollow butt. It will not come off a factory production line, but will come from a master craftsman who will build it from strips of selected Tonkin cane, accurately cut to perfect 60° angles, carefully tapered and miked to .001″ tolerance throughout their entire length, glued, seasoned, cleaned, *tested*, ferruled, *tested* again, guides mounted, *tested* and *cast.* It will only be finished if it meets every test. Otherwise it will be broken across the knees and thrown into the ash can. Artist rod builders make no "second grade" rods.

But, because the payment on the car is due or Johnny wants a bicycle and you can't afford a really fine rod, that's no reason why you should not go fly fishing, or even plug fishing with a fly rod. Remember that the line is more important than the rod anyhow. It's about 27½% line, 22% rod, and 50% MAN that makes every cast.

You can get *some* kind of a fly rod for $5.00. Once in a blue moon it will even be good enough to "learn on". For $10.00 you can get one with a few years of service built into it. For $15.00 you will get about the most for your money in factory rods. Above that price too much goes into useless trappings. Flashy silk wrappings, highly polished chromium plated ferrules, fancy reel seats, extra varnish coats, silk partitioned bags and handsome aluminum carrying cases will make a nice showy outfit with which to dazzle the boys along the creek, but nine times out of ten it is still the same cane and workmanship as the $15.00 rod. Personally I don't care a rap about "dolled up" rods, and the very best rods I own are the plainest in appearance. Shiny ferrules, pretty windings and handsome aluminum cases catch no fish. No rod is any better than the cane and workmanship that goes into it.

Reels

It has been shown impossible to "balance" a rod in the act of casting with a reel of any weight. A reel on the rod simply increases the inertia of the assembly, making it more difficult to put into the rapid motion essential to complete the cast. The weight of the reel is a burden upon the muscles of the caster. If you want to be orthodox, then carry the reel on the rod, carry and swing it all day long, but at least buy the *lightest* one you can find which is also large enough to hold the line and strong enough to stand the fishing.

If you have moral courage and believe the evidence of your own senses *you will carry the reel on your belt.* That's the best and most simple way to get its weight off your casting arm. You'll have to make your own belt reel seat, of course, as they are not yet on the market, but a satisfactory seat can be fashioned from a small sheet of aluminum at little cost and not much labor. Don't make it too small as that will make it wiggle on your tummy when cranking the line. An oval shaped piece of aluminum, about 3″ x 5″, makes a good practical base for the seat.

It took me a good many years to take this decisive step, but having tried it for the whole season of 1939, April 15 to November 30, I will never again fish any other way. Within a few years I believe that everybody will be doing it, and I am happy to have been among the pioneers who first reaped its advantages. It did wonders for me in the way of greater comfort, greater distance and greater accuracy.

Being a right-handed caster, I use a left handed reel. This stunt, which I learned from the great master, Jules P. Cuenin of San Francisco some 15 years ago, enables me both to take up slack line and to play my fish from the reel without first having to change the rod over to my left hand. It takes about three minutes to get accustomed to cranking the reel with the southpaw and not more than five minutes to forget that you ever did it in the old awkward way.

Leaders

I dislike that soft, raggy "jap" gut and am still neutral towards the other synthetics like "Vec" and "Nylon", but they are now making these materials much better than formerly and my buddy, Philip M. C. Armstrong, is developing knots by which they may be as securely and unobstrusively tied as natural gut. By the time he is through with his experiments I will be ready to benefit from his experience. Meanwhile I'll stick to natural gut leaders, six feet long and tapered from very heavy strands at the butt end to a diameter fine enough for the size of fly at the other end. Bass aren't as scarey about leaders as trout.

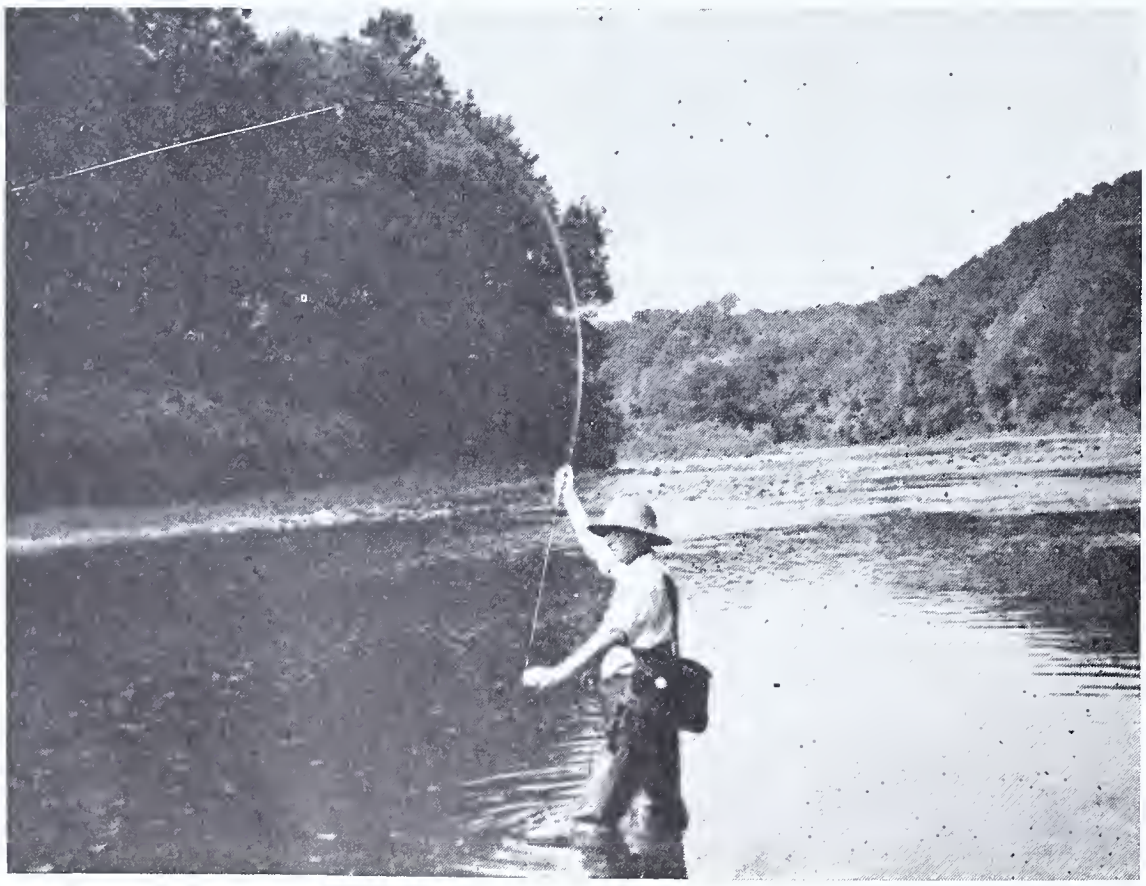
Flies

I've bought flies by the thousands, and tied them by the tens of thousands. There have been times when I thought a *definite* pattern was necessary to catch fish, and times . . . many more times . . . when I found one pattern just as good as any other. And I'm not saying that with my tongue in my cheek. There are times when no fly will tempt bass, and there are other times when any old fly is good enough.

In dry flies, as with trout, I tie about every pattern known, but I only fish with three. If it wasn't for my failing eyesight I could get along just as well with one, and the color of it wouldn't make the slightest difference in results. Fish view a dry fly from below; and, regardless of its color viewed from other angles, against the glare of a bright sky any fly is simply a brilliant, irridescent shadow.

Those I use are all palmer hackles, tied Michigan style on the bare hooks. One of them, used under most difficult light conditions, is all ginger. The next favorite is ginger in front; deep, rich brown to the bend. The third, and possibly the best of the lot, is ginger fronted, and "Grizzly" (barred rock) to the bend. All have tails from the red feather of a golden pheasant. Any other tail would be as good—or no tail at all. I use the ginger because its the closest natural color I can get to yellow, and yellow is the color which the human eye sees most easily

My dry flies are always tied with rather shorter, stiffer hackles and more of them than are commonly found in store flies. Personal preference again. I like my dry flies to float under any and all conditions, and I somehow fancy that bass like a juicy looking morsel.



Using left hand haul to pick up a long line with a 7½ foot stiff but light rod. Note that the left hand reel is carried on the belt.

With wet flies, that's something else again. Below the surface of the water the fish sees the fly without dazzling light interference, and it just doesn't make good sense to deny that fish can distinguish colors in their own element. I'm no biologist, but I've been fishing for lo these many years and I have raised many thousands of fish myself. I've seen them color up at spawning times, and I've seen the male sailing around in front of the female, fins spread and displaying his handsome colors, proud as any peacock. If fish don't appreciate colors why do they developd them? Some ichthyologists would do well to go back to their Darwin and read the chapters on natural selection again.

But I don't think that fish are very fussy about colors when it comes to food, at least in objects as small as flies. Probably the most natural colors are the grays or gray toned quiet greens and browns, but I have long since ceased to believe that fish rose casually and critically to examine my flies, perhaps to reject them because they weren't tied true to pattern. Instead I believe he sees a small moving object. He knows he can lick anything so insignificant and there's always the chance that it might be something good to eat. If he's not pretty quick it will get away from him, so he grabs it on sight and does his thinking, if any, afterwards.

So-o-o, in the matter of pattern in wet flies as in dry fles, I please *myself* rather than the fish. He doesn't know the difference, and the fly which pleases me is the fly which inspires me with confidence—the first requisite of an angler. I use "about" four patterns. My first choice is an "Old Irish Iron Blue Dun". Here's the pattern to avoid answering inquiries: ¶Tail, few whisks of fibres from red breast feather of golden pheasant. Brown hackles are just as good: ¶Body, bluegray, under fur from common rabbit. Neutral gray wool just as good: ¶ Ribbing, oval silver tinsel, tinsel cord just as good: ¶Wings, Gray duck or goose, according to size. (Nothing just as good): ¶Hackle, Natural "Black". (Brown, grizzly or any other shade just as good—and just as pretty! Please yourself).

My second choice is a Silver Doctor; Preferably the genuine salmon pattern, but anything just so it has a *silver body*, and the rest of which gives the effect of a living, vibrant *gray*: for this is the effect produced by blending the assortment of colors found in the Doctor. Any silver bodied fly is a good wet fly, but keep away from silver and gold in dry flies. They sink too easily.

My third choice, and the handsomest of all flies, is the Royal Coachman, tied either with dazzling white feather wings or white bucktail hair. It's no better than the plain Coachman or any other white winged fly. Probably not as good as a Silver Coachman, but it's *pretty* darn it, and what is fly fishing if not artistic?

My fourth and last choice is a genuine March Brown, except that I tie it with oval gold tinsel. The body is of mixed brown rabbit's fur, the wings of English hen pheasant's tail (you dasn't shoot 'em in this country) and the hackle is partridge, pinched short for small flies. Oh, Yes! I forgot. The tail is brown mallard. Its a beautiful fly to look at. I like to tie it and I always have a few in my fly box. But I never use it. I seldom change patterns. It's a nuisance and I don't believe the fish know the difference. Even if I felt in the mood for experimenting with color, by the time I got around to my fourth choice it would be dark, I'd be slipping on the rocks and couldn't see where I was putting the fly, and I'd be hungry and thirsty for a glass of foaming—fresh goat's milk. Oh, yeah?

Size may, or may not be, as important as color or pattern. I dunno. I have yet to kill my first million bass. I said that in a hurry. I *never* kill bass. They are too doughty in battle and altogether too friendly and roughish when they look up at me in the net. They make my creel smelly and are such a nuisance to clean; so many murderous ruffians are after their lives; yet they are so entitled to life, liberty and the pursuit of happiness. Bass are poor eating by comparison with juicy steaks, pork chops, fried chicken, liver and bacon—they ain't even as good as ice cream or pretzels and beer. Nope.

I have plenty of reasons for *not* killing them. I let 'em go. And I get a great kick out of watching their puzzled actions once they find themselves in the water again, waiting for that quick flick of the tail and the sudden dash for freedom when they think I'm not watching them. They are really comical.

Bass are much harder to raise in captivity than trout; and their intrinsic value, as determined by the sport they give us, is incalculable. Alive they are priceless. Dead they are just meat. The life of a bass cannot be measured in dollars and cents.

But here I am, wandering and meandering again. I was talking about size. Generally speaking I start out with a number four or six fly. If the water is cloudy or the light is dim I may start with larger flies, up to 2/0 if largemouth are suspected. If the water is clear and the light good, I use smaller flies, down to 8's in smallmouth waters. Once the fly is on the leader I seldom change it . . . possibly because I get as much fun out of casting as I do out of catching fish. I dunno.

Other lures used on fly rods, often by men who eventually become fly fishermen are legion. Bass bugs are a sort of go-between, a little better than fly rod plugs or spinners, and a little worse than bucktails or streamers. It's all in the way you look at it, or the way you were brought up! Just because you happen to be using a fly rod doesn't make you a fly fisherman. You are not a fly fisherman unless you use a fly alone as your lure. A fly attached to a spinner is another animal entirely.

Of all the other lures used on fly rods, the most murderous are spinners and spoons. If you *must* use a spinner, don't use it on a *good* fly rod. Use it on a factory rod, preferably something which cost no more than $15.00. Even then you shouldn't use a spinner larger than a No. 2 Hildebrandt single blade, or than size "A" in tandem, as larger blades than this will put a set in the best rod. Among spoons, the Pflueger "Pippin" and "Chum", and the fly rod sizes of the Johnson "Silver Minnow" are more lively even than the spinners. Whether they are as murderous or not, I don't know. I hope not. But in weak moments I've tried them, and I can say that they won't hurt a rod as much as a spinner or one of those little wooden plugs. It's not the mere weight of the lure that does the damage. It's the drag of picking it out of the water for the next cast.

STATE LAWS AID PLANS IN BASS CONSERVATION

Success of the Bureau of Fisheries' efforts to secure cooperation from the States in the protection of black bass is evidenced by the fact that 45 States have adopted closed-season laws for these game fish covering the spawning season.

Alabama, most recent to join the ranks of the cooperators in conservation, recently concluded that a closed season on black bass is essential to the preservation of that species, and decreed the month of April as the closed season. Because anglers' licenses had been printed and many sold before the regulation was promulgated, however, it was decided that the ruling will not become effective until January 1, 1941.

Louisiana, Oklahoma, and South Carolina are teh only three States remaining which have not adopted what the Bureau considers adequate protection for the black bass—a closed season covering at least the spawning period.

No trout fisherman was ever more proud of a brace of speckled beauties than was six year old Richard Mohr of Allentown of the two fine suckers he caught in the Little Lehigh this year. The two suckers measured 12 and 14 inches respectively, Equally proud of his sucker catch scored in the Delaware River was Bobby Fenstermacher, 10, of Allentown. Three suckers he caught measured 16, 18 and 20 inches.

The Perkiomen Creek at Collegeville, Montgomery County, during recent flood.

Fly Rod Technique and Spinners for Bass

(Continued from Page 2)

After a little practice the operator should find it possible to keep the line coming in at a uniform slow speed and this, in the operation of a spinner, is often more effective. In fact it is a mistake commonly made by anglers to drag a spinner too rapidly through the water in this style of fishing. More strikes will be registered if the spinner is operated so as just to keep it revolving well.

This style of retrieve is very convenient when fishing from a boat or when wading and I strongly recommend that it be acquired by any fly rod fan not yet acquainted with it.

It is of course important that one's rod be held in a strategic position while using this retrieve and Fig. 8 shows this quite clearly.

In spinner and bug casting for bass, much excellent fishing is had while wading. Except where bottom conditions are unduly slippery or sticky, this is by far the most comfortable method of fishing.

In July and early August, particularly in Pennsylvania and Maryland, while surface insect life such as dragon flies are abundant and the fish are rising briskly to them, this style of fishing is at its best.

However, as the wader goes into deeper water and its level rises toward his hands, this shortens his casting leverage and the laying of a long line becomes increasingly difficult. Even by casting sidewise it no longer is possible to cast with the elbow held at the side but this often must be raised shoulder-high in order to get sufficient line out.

Fortunately a long line is not often necessary while wading deeply as the angler then is not likely to be visible to the fish.

Wind is one of the fly fisherman's worst enemies. In fact it is one of the devil's favorite inventions in a bid for his soul.

When this rises to a point where serious interference with casting occurs, one might as well call it a day or if he must, waste his time at golf, bridge or twiddling his thumbs. On the other hand, a moderate breeze often is advantageous as it serves to conceal the angler from the view of the fish and causes them to feed more actively. In such circumstances, casting with a streamer fly and spinner may be greatly facilitated by the following procedure while casting against the breeze. Just as the back cast is completed and at the instant when the forward movement of the rod begins, the line being grasped by the left hand is jerked sharply downward and through the guides thus accelerating the impetus given the line by the forward movement of the rod.

This is a distinct aid in getting out line against a fairly stiff breeze and helps materially in obtaining distance under any circumstances.

To be successful with the fly rod, as with any style of fishing, some judgment must be exercised regarding the lure to be used in waters of different depths and colors. For instance, although a floating lure may be highly successful in a clear, limestone, or springfed stream, it is likely to bring no worthwhile results in water that is even moderately turbid. In waters of the latter kind, only a sunken lure ordinarily is effective and the addition of a spinner of small or medium size may substantially increase results. In white roily water, a luminous spinner in combination with a streamer or hair-minnow will sometimes bring fish to the creel when conditions look almost hopeless. I say "almost" because no true fisherman ever is without some hopes. The combination of spinner and streamer fly is one of the most valuable of the bass fisherman's weapons that should never be absent from the kit.

Personal experience in fishing for smallmouth bass in the Middle Atlantic States has shown that this fish rises most numerously to the fly and other small surface lures, during the period from opening day, viz: July 1 to August 15, and that after this period the surface fly becomes less effective. My personal feeling is that if the smallmouth season were opened on June 15th and closed November 1st, fly fishing for this bass would become really worthwhile in this area. As the peak of greatest abundance of insect adult life, that is to say the flight insects, is from June 1st to August 1st, the dragon flies, moths, butterflies, ants and other insects swarm over the water at this time. Furthermore, this coincides also with the period when the greatest amount of sunlight falls on the waters which is a very important consideration in fly rod fishing for smallmouth bass.

I am convinced too that reproduction of the smallmouth would not be seriously injured by this change for the area designated. So far as the month of November is concerned it is useless—a minus quantity, in fact, so far as fly fishing for smallmouth in this region is concerned.

With the largemouth bass, the case is quite otherwise, as this fish is more habitually a surface feeder and not seldom will rise to surface lures during bright days in the very late fall. Even with this voracious feeder, however, the sunken fly becomes more and more effective as the sun declines in altitude and the water cools below the threshold of maximum activity for this fish. In late November, I have found that the use of a brass spinner an inch long in combination with a well sunken hair minnow will kill fish when other means failed completely.

Now that the subject of spinners has been broached, it reminds me of one of my most persistent pet peeves, viz: the awful discrepancy in their numbered sizes as among the various manufacturers of spinners. For instance at this moment I have before me several specimens of Indiana spinners marketed by nationally reputable manufacturers, marked "No. 1". But these range in size from ½" x 5/16" to ⅝" x ⅜". In other words, the No. 1 spinner of the first dealer corresponds with the No. 0 spinner of the second. As the sizes increase, the discrepancy grows no better fast, that is, a No. 3 spinner of one dealer is 13/16" long but that of a second one is a full inch long.

Among Colorado-style spinners the condition is even worse as one specimen in my collection marked 1/0 corresponds with the No. 3 of another in size, etc., *ad nauseum*. For Izaak's sake, cannot no one do nothing about this mess? It is almost as sad a one as that of hook sizes, but the state of my indigestion forbids the discussion of that at present.

But, getting back to the spinners, the blade that spins spasmodically and which takes a vacation just at the moment a nice fish has noticed it, is a helluvathing. In fact it affords sufficient provocation for crimes of violence including mayhem and murder. The truth is that the designing of a spinner which knows its business and works at it constantly seems a lost art with some makers.

In order to distinguish some points from bad, let us now examine the anatomy of several of the commoner kinds of spinners to be found on the market today.

In judging the merits of a spinner, regardless of price, one should consider the following important points, or questions:

Will it spin freely and constantly? Is it of durable but not clumsy construction? Is its snap, for fastening for the lure, secure? Can this be operated with ease enough to avoid profanity?

Examine Fig. 9 which represents an Indiana spinner of simple but excellent construction. The snap is of the ordinary pattern, a type which when well made is quite satisfactory.

Please note that a bell-shaped brass bead of ample size is soldered firmly to the shaft just above the hook of the snap. This is shown enlarged in Fig. 10 at A. This firmly-fastened head is important not only because it supports the spinner mechanism but prevents the whole works from sliding into the bottom of the loop when the snap is opened, a most execrable thing.

Figure 10, at B, shows the smooth-finished annular bead which is loose and forms the bearing for the lower arm of the stirrup upon which the blade revolves around the shaft. This ring-bead provides a frictionless bearing which insures reliable action. The blade is thin, only slightly convex and spins like nobody's business.

A modification of the ordinary snap lock is shown in Fig. 11. Apparently this wire stub is intended to prevent accidental opening of the snap but I have not found that it does so. However, the projecting end of the wire, shown at C, soon scratches an ugly channel on the inside of the blade.

The style of snap shown in Fig. 12 was intended to render its operation more easy and it does this. In fact it operates so easily that it is liable to fly open while casting, thus losing either the fish or fly or both.

Fig. 13 illustrates an improvement of this same principle, as the sleeve is composed of a closely spiralled steel wire (E). This, when slid down, engages the hump on the free end with the result that its friction against the corrugated wire coil holds this firmly in place. This is satisfactory but a little clumsy in the smaller sizes.

The spinner shown in Fig. 14 is of rugged construction and the snap is of unusual pattern. This is perfectly secure but is very stiff and difficult of operation. The blade is permanently supported, well up the shaft and an excellent feature of this spinner is a built-in swivel (F) at the line end of the shaft.

At Fig. 15 is shown the snap and fastener of a relatively expensive, "22 karat gold" spinner, marketed by a nationally known manufacturer. The blade is of the Colorado shape, is made of heavy metal for its dimensions, spins with considerable reluctance, and it loses its golden glimmer speedily.

The fastening of the snap consists of an open wire spiral (G) that screws down over the loose end of the snap while this is held

closely against the shaft. This doodad must have been designed by a south-paw as it screws to the left in order to fasten it, furthermore it takes 10 full turns to accomplish this!

Just imagine if you can, the following scene:

With one of these so-wonderful spinners attached to your line, you stand waist-deep in the stream and have just risen a fish that insists on striking short. You know he is a monster from the tug-boat's swirl that he left. You are justly excited and, wishing to make him look foolish on your stringer, you decide to change your fly.

It is a hot day, your fingers are damp with perspiration, they tremble a little as laboriously you unscrew the snap fastening, 10 full turns. Your fresh fly, a known killer, is selected and strung on the snap wire. Then with damp, unsteady fingers you hostily press the open wire closely against the shaft. An infernal deer fly jabs his beak, up to the hilt, into the back of your neck and you slap him into a mere smear with your right. But, in the battle, your left has lost its grip on the slippery wire and the struggle begins all over. You succeed at last in pressing the spring wire home against the shaft and attempt to lock it there by screwing the spiral to the right in the natural direction, but it fails to catch and just as you realize that this is the wrong direction the left fingers fail again to hold and the snap flies open. Incandescent words faintly relieve the nervous tension until after a severe struggle you finally screw down the lock, *10 full turns* and are ready to make your cast. Perspiration drips from your brow as breathlessly you make it, only to discover that the monster has grown weary of that spot and left for parts unknown—the day is ruined.

I would, if I could, award the inventor of this phonus-bolonus, a medal of generous proportions made of a not too ancient cow-chip.

In the foregoing discussion, mention of manufacturers' names has been intentionally omitted. I am, however, anxious that anglers other than myself may have the benefit of my experience in the matter of spinners and tackle.

The beginning of each season sees scores of new fishing gadgets placed on sale. Some of these have merit but many represent no actual improvement over existing wares and not a few of them are entirely worthless. Almost without exception they are made the subject of that prevailing plague—exaggerated advertising, which would convince the gullible that, lacking this dingus or that ackamarackus, he might as well not attempt to fish this season.

Certainly, tackle manufacturers are to be commended for any experimentation that results in improvement in their wares but I desire as a member of their buying public to asseverate vociferously that such experimentation should be done at manufacturers' expense. By the board of Saint Izaak, we anglers adjure and obsecrate them to use the fishes and not the fishermen as their experimental animals.

"You've also probably noticed that the bigger the bankroll the tighter the rubber band."

MIFFLIN SPORTSMEN AT RECORD DINNER

With over 400 sportsmen in attendance, and a number of notable speakers ,the annual banquet of the Federated Sportsmen's Clubs of Mifflin County went over with a real "bang". As Paul Aurand, president of the East End Blue Rock Gun and Sportsmen's Club, sa aptly expressed it, "The best gathering of sportsmen ever."

After the turkey dinner, the toastmaster, Walter B. Wilson, introduced local game protectors and deputies, Dr. H. E. Miller, president of the Kishacoquillas Valley Sportsmen's Association, and Paul Aurand, president of the East End Blue Rock Club.

Seth Gordon, executive secretary of the Game Commission, was the first speaker of the evening and talked briefly on the excellent record of sportsmen in this area. He paid fitting tribute to those men that took part in the game feeding program this winter, as well as other years, and remarked that there was never any question of whether the game would be fed in Mifflin County. Mr. Gordon led the entire body in a silent homage to Frank Myers who devoted his entire life to Pennsylvania sportsmen and their problems.

Commissioner French told of the reasons why the Fish Commission delayed the stocking program until spring. Had the fish been stocked last fall the low water and intense cold would have defeated the entire idea. After experimentation on the part of the commission, it has found that spring stocking gives a higher percentage of healthier fish. Due to impassable roads some of the norehern counties will not be stocked for some time yet.

Game Commissioner Castner mentioned the willingness with which local sportsmen receive new ideas and suggestions. He stated that "we have the best and most progressive type of sportsmen in the state in this area."

The Game Commission's wild turkey expert, "Turkey Bill" Fluke, reported that wild turkeys are definitely increasing in Pennsylvania, thanks to natural propagation methods. Mr. Fluke did not mention it but he is the originator of the wild turkey propagation area idea in this state.

The annual election of officers of the Kishacoquillas Valley Sportsmen's Association was held with the following elected by a majority vote: President, Rev. James H. Goss; vice president, H. C. Sweigart; secretary, Reed Thompson, Jr.; treasurer, Roger Sweigart.

Several reels of Kodachrome motion pictures of big game hunting and fishing were shown.

TROUT DINNER AT BELLEFONTE

The annual trout dinner staged by the Bellefonte Kiwanis Club on Thursday night, May 23, prior to opening of the Fish Commission's Spring Creek Project on May 24, was attended by 120 sportsmen and conservationists from all sections of the state. It was one of the most successful dinners ever held, and was as usual most capably presided over by toastmaster Dr. Richards Hoffman.

Speakers for the evening included Harris Breth, hunting and fishing commentator for Radio Station KDKA Pittsburgh, George Harvey, director of athletics at the Mont Alto Forestry School, and Commissioner of Fisheries C. A. French. Fish Commissioners Edgar Nicholson, J. Fred McKean, and Harry Weber, C. R. Buller, chief fish culturist for the Board, H. R. Stackhouse, secretary for the Board, O. M. Deibler, former Commissioner of Fisheries, and H. C. Turner, burgess at Bellefonte were introduced.

Catches on opening day at the project were termed fair. While Spring Creek was in good condition for trouting, it was believed that prevailing overcast skies caused a lull in the striking of the big trout at the Paradise, as it is popularly termed. Largest fish taken were two rainbow trout, each 21 inches in length. John H. Witherow of Latrobe creeled a rainbow weighing 44 ounces, while a fish of the same length as his catch, taken by S. E. Kuhn of Altoona tipped the scales at 43 ounces.

This largemouth bass, 20½ inches in length and weighing 4 pounds 4 ounces was taken last season in Brandywine Creek, Chester County, by Charles L. Hosler of Honey Brook. His catch won first place in the largemouth division of the contest conducted by the Chester County Fish and Game Association.

HERE AND THERE IN ANGLERDOM

Cumberland County trout waters yielded two fine brown trout to Carlisle fishermen to date, according to a report received from Warden George James of Carlisle. Fishing in Letort Spring, Ed Small scored with a brownie 22 inches in length and tipping the scales at 3 pounds 12 ounces. He scored the catch on a minnow. Otis Shetron landed a fine brownie in the Yellow Breeches. His catch, measuring 21 inches in length, weighed 2 pounds 15 ounces.

Catching big catfish is a specialty with Frank Burris, 70 year old fishing veteran of Mount Morris. Recently, Dunkard Creek in Greene County yielded him a catch of catfish that had a total weight of 26 pounds.

Realizing the value of reforestration on fishing waters, the Lehigh County Federation of Sportsmen's Clubs at a recent meeting decided to plant 4000 seedling trees on the property of Henry Smith at Jordan. The project, for which seven acres of land were made available, was under the supervision of Dewey Fenstermacher and Leo Bateman of the Central Junior High School faculty in Allentown, according to Charles H. Nehf. Boys from the school will assist in the work.

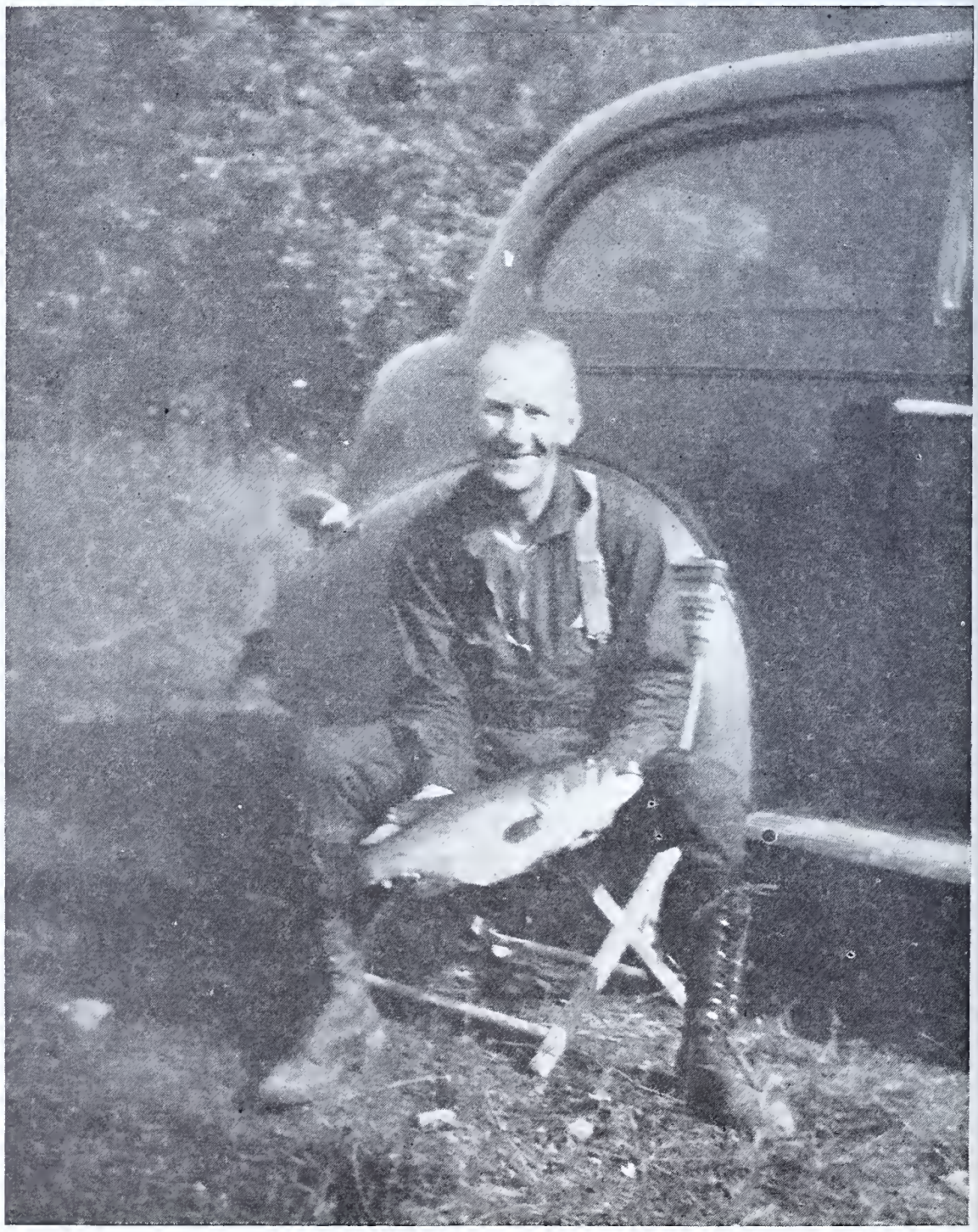
Bob Russell of Milton caught a mighty fine brown trout in May, the fish measuring 22½ inches in length and weighing four pounds. Just where it was caught, however, remains a dark mystery.

A surprise catch was scored on the Delaware River by Thomas Coffield of Northampton while he was fishing for suckers recently. He landed a nicely marked brown trout, 22 inches in length and tipping the scales at 2 pounds 12 ounces.

Lengthy but extremely racy in appearance was the 25½ inch brown trout taken by James Gallardy of Summerhill in Yellow Creek, Bedford County. The big trout weighed only 2 pounds 12 ounces.

Harrisburg anglers took some fine catches in central trout waters earlier in the season, according to a report received from Special Warden Maurice Kanneg. A pretty creel of brown and rainbow trout was caught by Benjamin Scott in the Yellow Breeches Creek, Cumberland County. They ranged in length from 12 to 17½ inches and were taken on a quill minnow. Harry and Sam Toloumes each scored good catches in the same stream, their fish ranging in length from 8 to 15 inches. Seven brookies, from 8¾ to 12 inches in length comprised the catch of Linwood White, Clarence Dukes and Martin Franz while fishing McCabes Run. Clyde Fox, secretary of the Harrisburg Hunters' and Anglers' Association, scored a dandy catch of rainbow trout in Stoney Creek, the fish ranging in length from 8 to 12¾ inches.

Spring Creek in Centre County yielded a fine early season catch of brown and rainbow trout to G. L. McKibbon of South Williamsport. Four brownies and four rainbows comprised the creel, ranging in length from 11 inches to 16 inches.



This magnificent smallmouth bass, 21½ inches in length and weighing 6 pounds 2 ounces, was taken on plug last season in Lake Gordon, Bedford County, by H. W. Hardy of Belle Vernon. Famed for the tremendous girth and weight of its largemouth bass, Gordon rarely yields a smallmouth. This fish took first place in the smallmouth division of a fish contest conducted in four states, New York, Pennsylvania, Virginia and Ohio, and was record fish in Pennsylvania.

VOICES OF THE WILD

By A. G. Shimmel

These are the sounds that make the pulse of those
Who love the out of doors
Step up its tempo, beat a faster rhyme,
And seem to prod our memory with the things,
all dim and half forgot',
That once we knew, yet know not—place or time.

The moaning wind among the pines; the crash of
distant thunder when
The summer storm is breaking o'er the hill;
The hiss of sleet among the trees; the crack
of frozen timber when
All else with intense cold is white and still.

The startled snort of white-tailed deer; the
crash of antlers as two bucks
Decide the age old problem, nature's way;
The trumpet call that winging geese fling
downward from the heights to us,
The urge to follow them away, away.

The campfires' pleasant crackling; its warmth
and cheery fellowship.
As smoke and sparks float upward through
the trees;
The melancholy call of crows complaining,
from their leafless snag
That snow is covering the fallen leaves.

The splash of madly feeding trout at evening
when the first shad hatch
Is ticking all the waters still and clear;
The hooting of the barred owl; the shrill squeal
of the snow-shoe hare
Their hackle raising tale of death and fear.

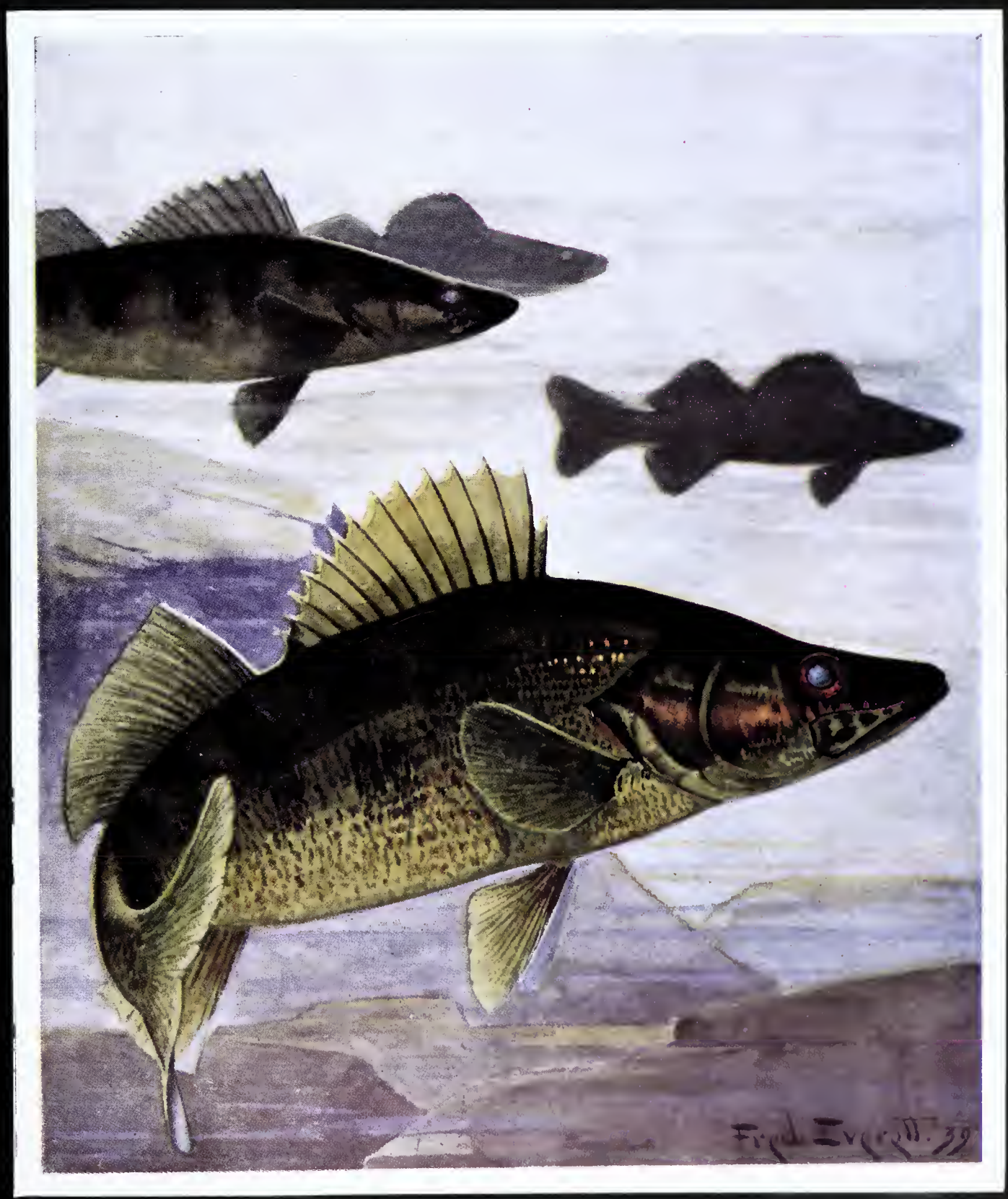
These are the sounds that grope among the
great primeval springs of life
And stir the memories of that distant past
When man first ceased to walk upon his
knuckle-bones and stood erect,
Then raised his head, to be a man at last.

Want Better Bass Fishing?

Save Food for Bass.

Use Artificials!

PENNSYLVANIA ANGLER



WALLEYED PIKE

P 38.3

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Vol. 9. No. 7

PENNSYLVANIA ANGLER

JULY 1940

EDITORIAL

PYMATUNING SANCTUARY

MENTION has been made in previous issues of cooperative agreements with water companies on bodies of water under their control which will materially increase warm water distribution.

On June 1, 1940, an agreement was signed by the Department of Forests and Waters, the Game Commission, and the Board of Fish Commissioners enabling the Board to establish a Fish Farm in the refuge area of the Pymatuning Reservoir.

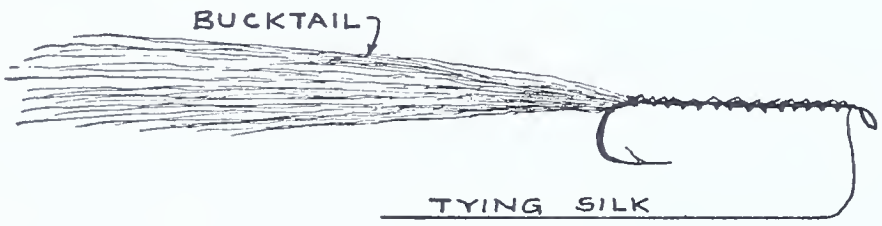
In the construction of Pymatuning Reservoir, Crawford County, comprising approximately 18,000 acres, a game and fish sanctuary of 3700 acres was created on the upper dam and adjacent land, 2500 acres of which are now covered with water. For the past two years we have made extensive biological surveys of this area. and as a result, it was found the sanctuary had reached a point in fish production where a certain amount would have to be removed annually to prevent loss. These fish are to be used in stocking the main body of the lake, the surplus to be distributed to the inland waters open to the public for fishing. This year's crop has already reached approximately 400,000 fish of the different warm water species, and up to this time 30 tons of adult fish have been made available for stocking. In addition 25 bushels of yellow perch eggs were taken to the various hatcheries where they were hatched and distributed.

From all indications, it appears the sanctuary each year will produce sufficient pike and yellow perch eggs for all inland waters, and will also be a source of supply for sucker eggs. There will also be produced sufficient bass for the rearing ponds at several of the Board's Hatcheries, and in addition a sufficient number will be propagated at the sanctuary for distribution in the main body of the lake. This will also apply to bream, catfish and minnows.

Plans are now completed for the construction of a two-story building which will contain a series of tanks for the sorting and handling of fish and the growing of bass fry to the fingerling stage. A number of pools will also be constructed for holding areas and the growing of daphnia.

The primary purpose of this new Fish Farm is to keep the fish population under control, and at the same time the surplus removed will add greatly to our distribution of warm water fish.

C. A. French
Commissioner of Fisheries



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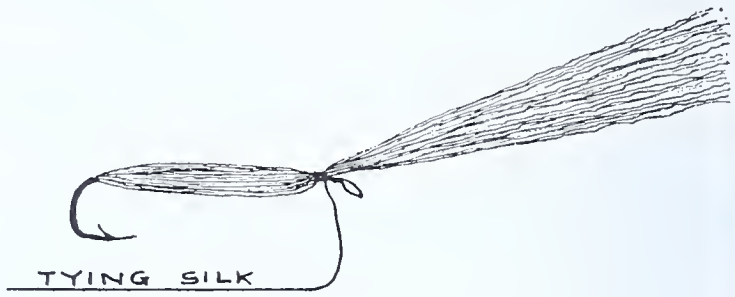

FIG. 2.

FIG. 3.

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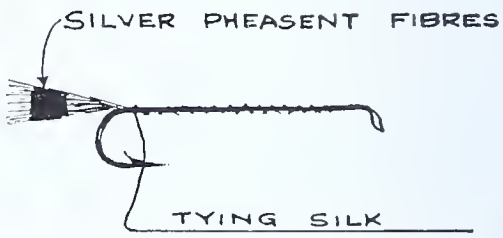

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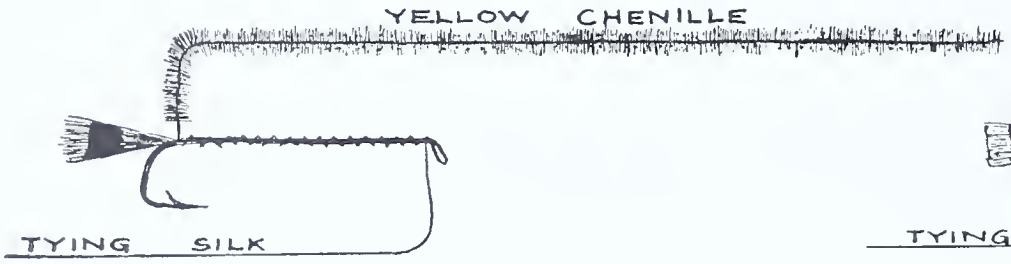

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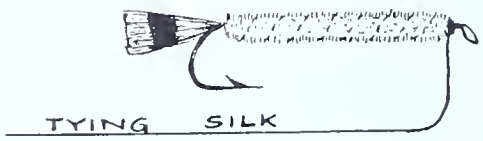


FIG. 7.

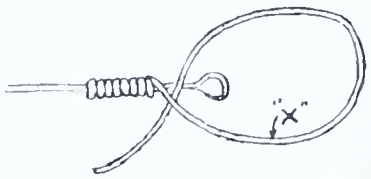


FIG. "A"

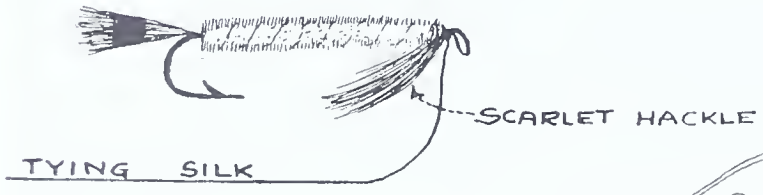


FIG. 8.

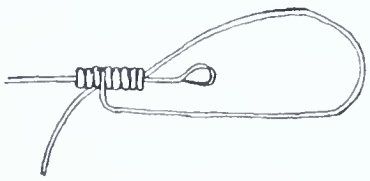


FIG. "B"

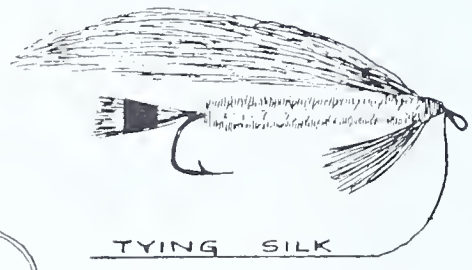


FIG. 9.

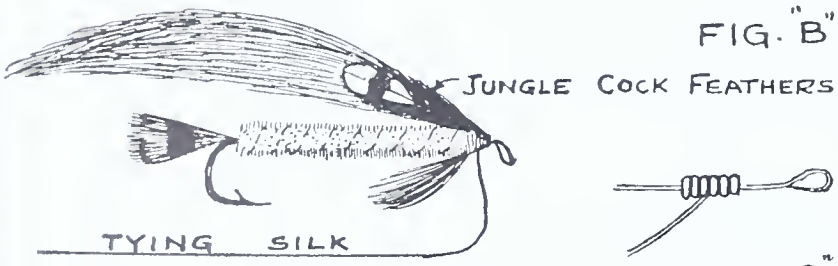


FIG. 10.

FIG. "C"

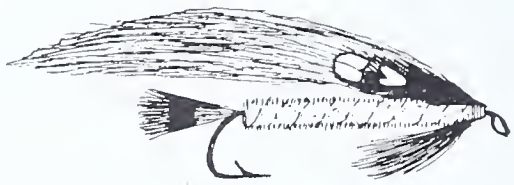


FIG. 11.

Wetzel. 6-11-40

BUCKTAIL FISHING

By CHAS. M. WETZEL

As far as I have been able to gather, bucktails were first introduced to the United States by Emerson Hough, after returning from a trip to the Arctic Circle. These flies as used there by the natives—no one knows how long—were large and made entirely of deer hair. At first bucktails were slow in gaining a foothold in this country—it was difficult to imagine anything so large being good for trout—but size proved no obstacle, and as word got around, as such things will, everyone started taking them up. For the past ten years, a regular buctkail wave has been sweeping the country, meeting with such success that no one can deny, the fly is here to stay.

As takers of large trout, bucktails have no equal. Sometime check the flies used in the prize winning fish contests; the number of large trout taken on these lures will prove astounding. There is something about the bucktail—probably the lifelike crawling motion of the hair as it is being worked through the water—that proves irresistible to trout. They will come for it again and again, so often in fact, that one wonders if the fish can be put down; and this applies not only to old lunkers, but small trout as well.

Large brown trout feed mostly at night, or immediately after a rain which raises the creek to a higher level. The reason for this is more or less obvious, for under the protective mantle of darkness or discolored water, the inherently shy brown trout boldly sets forth on his foraging trips, secure in the knowledge that his movements are unobserved, and that he can approach his prey with a minimum of exertion. These are the best times for fishing bucktails, but one can catch trout on them almost any time providing the water is not too muddy.

In general I prefer the water not over three feet deep; and when it is slightly discolored, the best success will be had in the shallower places, such as the tails of pools. As a matter of fact, the shallower the water, the more successful bucktails seem. Minnows frequent such localities, and these lures when retrieved through the water bear a striking resemblance to them.

Streamer flies are tied very similar to bucktails, with the exception that the wings are made from hackles, instead of hair. Four of these hackles are generally used—two being placed on each side of the hook with the curve of feathers flaring away from the shank.

Both bucktails and streamers are tied in a wide variety of patterns, and the majority seem to catch fish. However, a few have proved outstanding such as the Alaskans, the light and dark Tigers, and the Black Ghost, as well as many others. Due to their large size, all these flies are easy to tie, and the money saved by doing so represents quite an item, especially among some fishermen who must obtain every new lure that appears on the market. There are no doubt many fishermen who have ambitions to tie a fly, yet when they look at some of the small creations turned out, they feel that it would prove an impossible task. For those who maintain that their fingers are all thumbs, I would urge them to try tying a few bucktails, starting out with the Alaskans—the simplest of all flies to tie. These Alaskan flies are very simply made, and I first saw them tied by an Algonquin Indian up in Northern Ontario. Suppose we tie such a fly.

Place a long shanked hook in the vise, and with well waxed tying silk (size 00) start winding over its own end, beginning about an eighth of an inch back from the eye. Make a few turns of the tying silk, then swab the shank of the hook, including the wound over portion with lacquer cement, so that the body will remain in position and not turn. Continue winding out to the bend of the hook, where the tying silk should be left hanging with hackle pliers attached.

Clip off a number of long white hairs from the tip of a deer's tail; place the butt of this tuft near the bend of the hook, so that the hair is uniformly distributed about the shank, then lash lightly in place. Don't exert any pressure on the tying silk at this stage until the butts are bound down; if you do the hair will buckle up and form an unsightly bulge. Now secure the hair in position with a number of firm turns, see Fig. 1.

With the butts of these hairs securely lashed in place, wind the tying silk up near the eye of the hook where it should be left hanging with hackles pliers attached.

Now take the long hair in the rear, bend it forward, and secure firmly in position immediately back of the eye. Fig. 2 represents the fly at this stage.

Take this remaining tuft of hair coax it upwards until it lies on top of the hook shank, then bend it backwards and again fasten securely. The wings are now in place, and to secure them in position a few more turns are made around the hair. Now bring the tying silk forward take a couple more turns around the head, then fasten off with the whip*. Tear off the excess end of the tying silk; put a drop of lacquer cement on the head and the fly Fig. 3 is finished. Simple wasn't it? All we needed to form this fly was a piece of tying silk, some long white deer hair, and a long shanked hook. The beauty of it is that it will catch as many trout as any of the others, and even the rankest novice can tie it.

While frowned upon by the ultra dry fly purist, these large bucktails, feather dusters or whatever you choose to call them, have their place in every fly book. Some of the stiff shirted gentry claim that their only use is for locating the lair of old cannibals, yet it is difficult to imagine their returning such fish to the water should they become accidentally hooked.

Certain peculiar characteristics that trout display toward bucktails have been noted by all anglers who have used them for any length of time. The main one is the tendency they display in rising short to the lure. This occurs most frequently when retrieving the lure downstream or when lifting it from the water so near you that the fish becomes alarmed by your presence. Trout naturally lie with their heads pointed upstream and they deviate little from this position even when rising to a fly. Depend on it that when a trout reverses this procedure to chase a bucktail downstream, it is doing something contrary to nature and that it will revert to its natural position with all possible speed. Sometimes they pursue the lure long enough to grab it, but in perhaps the majority of cases, they grow uneasy over following its downstream course, and make one last fling, no doubt with the object of frightening it before it gets out of sight.

But perhaps the greatest reason of all for short striking fish is that the bucktail is moved too fast in the water. Next time, try working it a little slower. My policy is to pull the bucktail directly across, or slightly upstream, and to give the trout ample opportunity to sieze it. This may or may not be the best way to do it, but the occasion is rare when I lose a fish through short striking.

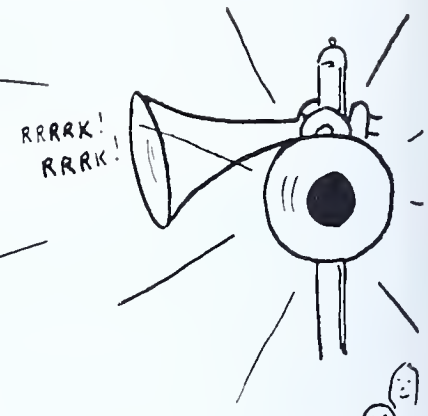
In general, bucktails are fished near the top of the water, about six inches or so underneath the surface, yet at times it is necessary to go deeper, especially when the trout are hovering near the bottom. For ordinary conditions, a split shot sinker size BB attached to the leader directly above the hook will suffice. If you tie your own, the hooks can first be weighted with lead fuse wire before the fly is constructed—on the whole a much better arrangement. Having lost a considerable number of large trout fishing bucktails with light gut, I now use nothing lighter than IX, preferably heavier. One never knows when he will tie into an old lunker, and why take chances on losing a nice fish? Examine the leader frequently, especially where the split shot sinker is attached. This is the spot where the gut first starts fraying, and when the first signs begin to appear remove this portion.

Some fishermen have the ability to raise a few fish out of every pool they encounter, then again, others are fortunate if they get a single strike. Knowing where fish lie is most essential. I have taken many large trout in water not over six inches deep. Most of these fish were taken immediately along the shore line, under overhanging banks, near projecting rocks, roots, brush, etc.,—places where trout lurk half hidden during the heat of day. There is a big thrill in snaking trout out of such shallow places; one can often see them coming, bearing down on the lure with lightning speed, sometimes with the upper half of their body protruding above the surface.

Next to knowing where trout lie, probably the most important part in fishing bucktails is the method in retrieving the lure through the water. Here constant experimentation is necessary. An old reliable method is to retrieve the lure in a series of short jerks—each approximating a few feet in length—alternating each one with a brief pause, that causes the lure to sink deeper in the water before its journey is again resumed. If you are fortunate enough to get fish coming—even though they do not take it—cultivate this method for it will eventually prove the best. Later on you will unconsciously form

(Continued on Page 16)

TEST-TUBE BATTING FOR CATERPILLAR



by

P.M.C. ARMSTRONG

HAVE you ever made a quick job of packing, and driven like all h— to get out to get the evening fishing? Oh, sure.

Maybe you got there just as the sun was going down, and saw a dimple, or two, or three, where the trout were working on a hatch of flies, strung up your rod in nothing flat, raced into your waders, presto, and then —— with that awful sinking feeling in the pit of your stomach realized that you hadn't remembered to soak any leaders. You and me both, pal.

Then maybe you got out a dry leader, and hoped you might be able to make some kind of cast with the confounded clock-spring the caterpillars' inside had made, and uttered futile opinions of the dam' thing which would have made a mule-skinner blush with envy. Don't look so guilty, bo. We all belong.

Did you ever have a fish break off a couple of feet of that expensive tapered leader, and then find that you hadn't put any spare tippets in the leader box? Had to fish with a leader far too heavy for so bright a day while you waited for some fine gut to get well wetted up? Oh, yes; me too!

Did you ever find that those nice 3x tippets Joe gave you last summer had about as much strength as a moonbeam, so that you lost flies by the dozen, to say nothing of fish, just because the gut was old and weak? Sure, I know all about it. I'm Scotch too. Drawn gut costs money, and we can't afford to throw it away. We have to take a chance, even though we know it doesn't keep any too well.

But we don't have to waste any more valuable profanity on the doggone stuff now. Not unless we are hog-tied by convention. Modern chemistry has come to the rescue, and has accomplished what Mr. Caterpillar's innards never could do. Leader material is now available which is so far superior to Mr. Caterpillar's best efforts that it is almost a miracle. Mr. DuPont's clever chemists have done the trick. They call it — well never mind what the chemists tag it — commercially it's nylon.

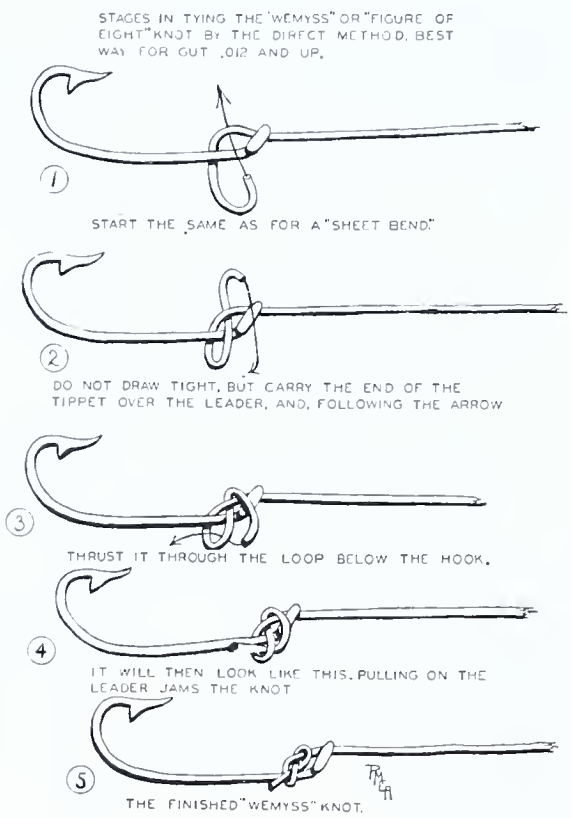
Believe it or not, Bob, here's what it can boast.

It is as strong, gauge for gauge, as the best Spanish gut, often stronger, even when the gut is perfectly fresh. When the gut is at all old, nylon is much stronger.

It is perfectly round and true to gauge from end to end (yes, honest), graded in even thousandths of an inch, and comes in twenty-two inch lengths.

Sound pretty good? Well, that isn't all.

You can take a nylon leader right out of the envelope and fish with it, just like that. No waiting for it to soak up. Even if you do it takes up practically no water. You tie it *dry*. Think of that. To be sure, it is a bit more difficult to tie securely than Spanish gut, but you soon get the hang of it. You have to avoid certain knots, and all knots must be tied as tightly as possible, but, after all, they should be anyway. Watch your knots.



It wants to lie out straight, and does so. No clock-springs. Just run it through your fingers a little.

Isn't that enough? All right, here's some more.

It doesn't get rotten without warning and drive you crazy. Water doesn't hurt it. Neither does careless handling, within reason. It will keep practically forever.

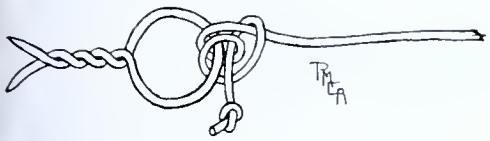
Want another? Aren't you convinced yet? Well look at this one.

If you are going out again tonight, or tomorrow, or next week, don't bother to remove the leader from the line. Just wind it up on the reel with the line. No, it won't get stiff and coily. You can just pull it through your fingers once or twice, and go right ahead fishing. Even leave the fly on, if you like and can get it through the guides.

It is the answer to the angler's fervent prayers, this nylon. All we have to pay for all of these blessings is a bit more care in tying the knots and in making sure they are properly jammed. It doesn't bother old timers much who know their knots, but some of the fraternity who are not so "knot-wise" have reported difficulty. But I can assure you that if you use the right knots, and *tie them tight*, you will have far less trouble with terminal tackle failure than with Spanish gut.

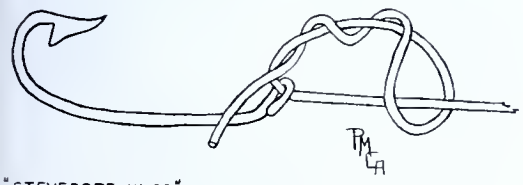
The manufacturers of nylon have had prepared a booklet telling how to tie some good angler's knots, and will mail it to you on request.* It is good dope for any angler to have, whether he is a user of nylon or not. But once he does try it he probably *will* be a user.

My own experience convinced me of this. For several trips, while making field experiments with the material, I used nylon exclusively, and was conscious of no particular difference in holding qualities. But by chance I substituted a drawn gut tapered tippet, and it had me frantic with the comparative ease with which I broke off flies, until I learned to treat it more gently. Until someone else comes along with a material still better nylon leaders will have the call with me.

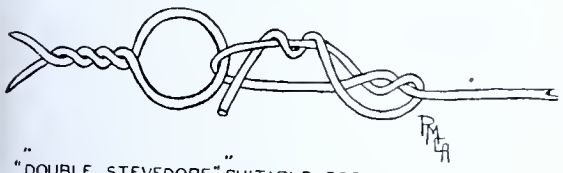


"THE FISHERMAN'S BEND." THE OLDEST AND BEST KNOT FOR AND PURPOSE WHERE SECURITY IS THE PRINCIPAL FACTOR. MAY BE "STOPPED" IN SEVERAL WAYS.

SHEET BEND." OR JAM HITCH AS A HOOK KNOT. THIS KNOT SHOULD NOT BE USED WITH GUT SUBSTITUTES.



"STEVEDORE KNOT." MAY EITHER BE SLIPPED OVER THE EYE OR JAMMED OUTSIDE. QUICK AND EASY.



"DOUBLE STEVEDORE." SUITABLE FOR RINGED HOOKS AND SWIVELS.

You will find the knots shown in the nylon book satisfactory, as well as many others. But some of the most popular knots with anglers will not work well, and may slip. For instance, the well known "Sheet Bend", also known as the "Jam Hitch" and by several other names, will not hold with nylon. (Figure I.) So avoid its use. In general, knots in which the friction is nylon to nylon will hold, but where most of the friction is around the neck of the hook it will not hold.

A very easy knot to tie, and which will hold with any kind of material is the "Stevedore," sometimes called the "Double Figure of Eight" (Figure II.) It may be slipped over the eye of the hook, or merely jammed against the eye. It will hold well either way.

For use with a ringed hook or swivel, the ones shown in the nylon book are good. Another excellent knot is the "Double Stevedore" (Figure III.) Best of all with a swivel is the "Fisherman's Bend," (Figure IV) which is one of the oldest of knots, and used for more purposes, in all probability, than any other knot except the almost universal "Sheet Bend."

The nylon book shows one method of tying the well known "Wemyss Knot" or "Figure of Eight." This method is excellent for fine gauges, but where heavier gut or nylon is used it does not work as well. The direct method of tying (Figure V, 1, 2, 3, 4 and 5) is easier with heavy gut. This applies to all gauges above 1x or .011 inch. Incidentally, never use the "Figure of Eight" on a bare hook, particularly with gut substitutes of any kind, as it will almost surely slip.

Although the well known "Major Turle's Eyed Fly Knot," usually more briefly referred to as the "Turle," is one of those recommended by the manufacturers of nylon, there has been some complaint that this knot does not hold. If tied tightly the "Turle" should hold well, but for anglers who lean toward this type of knot, that is a running knot or noose around the shank of the hook, there is a better one, which will never slip with any type of material.

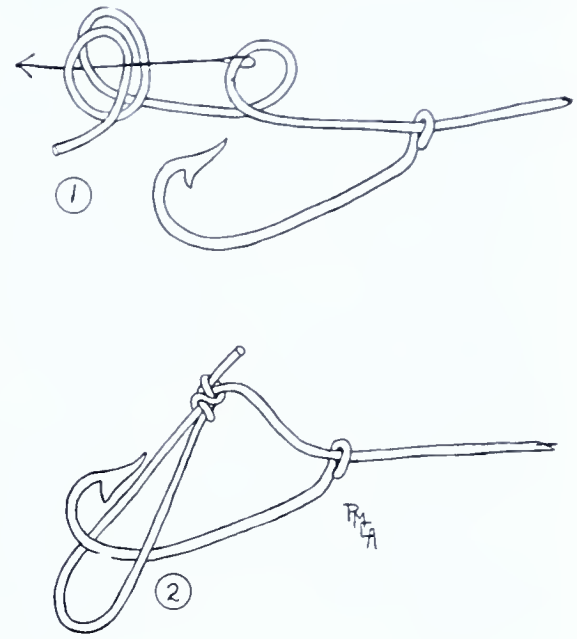
Similar to the "Turle" is the "Blood Noose," which is a running knot formed by tying a "Two Fold Overhand Knot," or "Blood Knot," around the standing part, and then slipping it over the hook and around the shank in the same way that is used in tying the "Turle." Figure VI, 1, shows the easiest way of forming this noose.

After running the gut through the eye of the hook make a double loop at the end (Loop a). Now form a second loop at b, and thrust Loop b through Loop a in the direction of the arrow. When this is drawn tight it takes the form shown in Figure VI, 2, and the loop is passed over the hook in the usual way to complete the knot.

In the course of experimenting with nylon, and trying out almost every knot known to man, it was discovered that the knot known to sailors as the "Snubbing Hitch" would hold beautifully with nylon, or any other material, with all gauges of tippet from .005 up, and with any kind of hook, swivel or ring. While this knot is not entirely unknown to anglers, and may even have been published, unknown to me, I feel quite sure that the method of tying which I have discovered is entirely new, and is so simple that it is surprising that it has not been given publicity before. I like this knot so well that I am surrendering to vanity and labeling it with my own name, with the readers' approval, I hope.

To tie the "Armstrong" Knot, push two or three inches of the leader through the eye of the hook and double it back along the leader. Now twist the fly in the fingers until the leader is coiled about itself several times. The exact number is immaterial, but at least three complete turns of the fly should be made. Four is better. Then slip the end of the gut through between the two parts of the twisted leader, next to the eye of the hook.

BLOOD NOOSE" OR TWO FOLD RUNNING KNOT SIMILAR TO THE "TURTLE" KNOT, BUT MORE SECURE.



Pull it up tight. That's all there's to it. Easy as getting a traffic ticket.

It is like half of the knot customarily used in tying lengths of gut together, and just as secure. Try it.

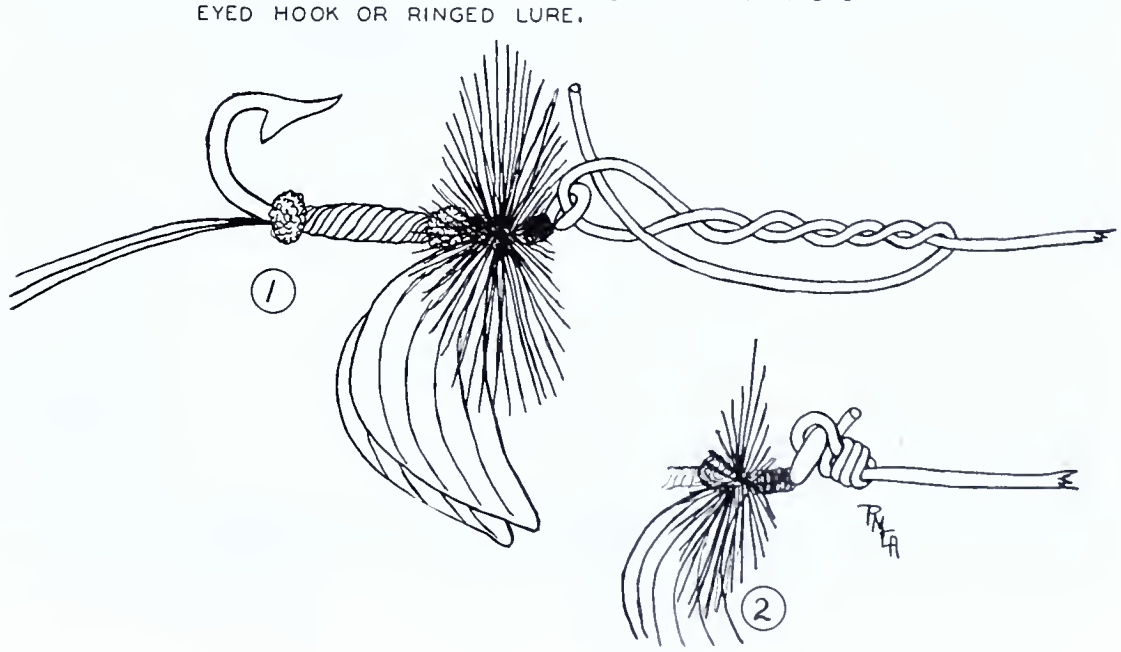
In a later article we hope to show how anglers may design and tie up their own leaders, and describe the best knots to use for this purpose. Now that there is available a reliable domestic source of leader material at a price within reason, it is expected that many more anglers will be impelled to "roll their own."

Here is one item of fishing tackle for which we no longer have to turn to Europe for our supply. American made rods, lines and reels have already surpassed in quality and largely displaced imported makes. It seems probable that American made leader materials is about to do so likewise.

In addition to nylon there has recently come on the market another synthetic leader material, a product of the Dow Chemical Company, made from Venilidine Chloride, and sold commercially as "VEC." While this

(Continued on Page 24)

"ARMSTRONG KNOT." THE EASIEST KNOT FOR ALL KINDS OF GUT, AND SECURE IN ALL SIZES WITH ANY KIND OF EYED HOOK OR RINGED LURE.



"DOG DAY" PLUGGING

Sultry August Days Seem to Affect Game Fish as Well as Fishermen

By ALEX P. SWEIGART

AUGUST, as a fishing month, has long proved a bugaboo to the angler. During the "dog days", as they are appropriately termed, a sweltering sun combines with frequently low water in many of our bass streams to force prevailing water temperatures into high brackets well over the 80 mark. Of the warm water game fishes apparently most affected by this condition, the common chain pickerel often found in bass streams takes top rank. Soreness of the jaws and loosening of its sharp fangs contribute to its lack of interest in plugs and other artificials, although occasionally pickerel may be teased into striking even during August. Smallmouth bass, largemouth bass and wall-eyed pike, however, while definitely at the most sluggish period in their mid-season foraging, may yield fair sport if certain elemental factors relative to their environment are taken into consideration. It is to be emphasized that stream fishing is the subject of this article. The largemouth bass, primarily a pond and lake fish although occurring more frequently in recent years in weedy sections of central Pennsylvania streams, will be found to furnish better sport in lakes at night, particularly during August periods of the dark of the moon.

Now, back with the smallmouth bass and wall-eyed pike of central county waters. There's a trite old saying "The early bird catches the worm" that can be most profitably observed by plug fishermen during sultry August weather. Late evening fishing, particularly that period of one hour before dusk, is to be ranked on a par with plugging during the hour in the morning immediately following break of day. Both periods bring back thrilling memories of days astream. Years ago, on the Tuscarora Creek, the writer had observed one evening in the lower stretch of a deep pool the swirling of two big smallmouth bass on the feed. At the time, we confess without shame, we were using live bait, stone catfish, but nary a strike was had from either fish. Next morning, during the period when the first tinges of daylight had appeared over the ridge in the background, the pool was again approached. A cast with the smallest "stone cattie" in the bait bucket had hardly touched the surface that August morning when a bulging swirl appeared and the line started moving sedately, slowly, upstream. A pause, start and the hook was set into the upper mandible of the gamest smallmouth we have ever hooked. The big fish failed to break water, but its underwater lunges stripped the line from the reel at will. How long the battle lasted is not to be reckoned in minutes. The fact remains that after the big smallmouth, slightly under 20 inches in length and tipping the scales at 4½ pounds, was finally rolled into the shallows it lived but a few minutes in the live net.

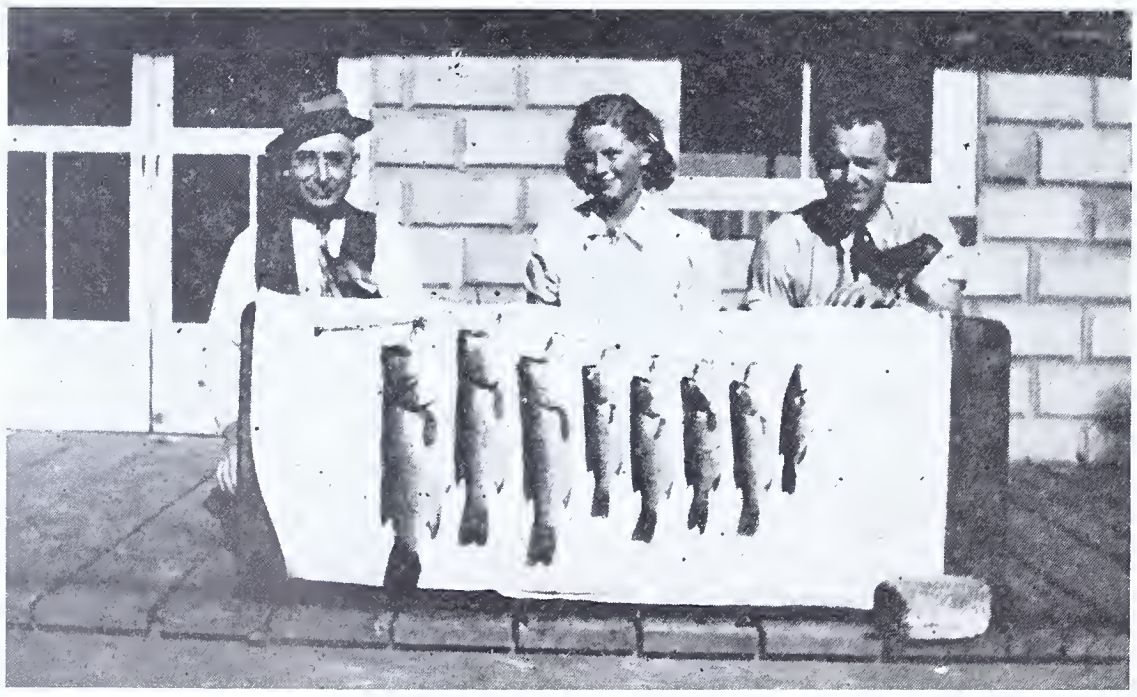
The grand old Conodoguinet Creek in Cumberland County furnished an even more dramatic incident about four years ago, this time on the plug casting outfit. It was dusk of a sultry day in mid-August, and we had fished over about a mile of stream without a strike. Finally, when dusk had fallen to the extent that merely the tip of the casting rod could be seen, a cast was placed across a deep ledge channel. Midway in the retrieve of the plug, a jolting strike almost tore the casting rod from hand, and an instant later, a mammoth smallmouth swirled on the surface, its broad tail slapping as it turned. Literally, we froze to the reel handle and a moment later bass, plug and about 8 feet of leader left for parts unknown.

Anthony Surdock of Pittston took this 3½ pound smallmouth bass in the North Branch of the Susquehanna River last season. An artificial scored the catch.

August fishing last summer on central streams revealed several facts that may or may not have bearing on this phase of the season sport. Drought and extreme heat prevailing virtually all month furnished as near maximum unfavorable conditions as have been encountered to date on streams fished. Thermometer readings revealed water temperatures ranging from 79 to 89 degrees Fahrenheit.

That Time Element

It would be verging on the ridiculous to specify anything like definite times of day during August when a maximum amount of action might be expected from our stream smallmouth bass and wall-eyed pike. The bass in its foraging is every bit as temperamental as the trout, switching quickly from one type of forage to another. Wallowing in the shoreline shallows in quest of shiners that skip in silver flashes over the water surface in the morning, his highness, Dolomieu, by dusk may be nosing about the bottom rocks and ledges in quest of stone catfish, helgramite or crayfish. It goes without saying that artificial casting lures are most effective during active feeding periods of the bass, although we have known occasions when the mottled kings struck seemingly out of pure



Fishing artificials. Mr. and Mrs. George Renne and B. Davies, all of Wilkes-Barre, scored this splendid catch of Lake Wallenpaupack largemouth bass last season.

cussedness. Be that as it may, the observant angler should try to note scattered minnow schools as a fairly good indication that action is in the offing.

Returning to observations made last August, best action periods were found to be in the hour preceding dusk. Runner-up sport was had in the two hours following daybreak, and on two occasions, the light lures met with enthusiastic reception from the bass at mid-day. There's an appeal to early morning fishing during mid-summer that sets it apart from other periods of the day. Mist rising from the water and awakening bird life along the shoreline apparently adds an inimitable tinge. Incidentally, waters tried were Tuscarora Creek, in Juniata County, Cherman's Creek, Perry County, the lower Juniata River and the Conodoguinet Creek in Cumberland County.

Picking Your Water

An invaluable aid to the mid-summer fisherman is the stream thermometer. Temperature readings, we believe, are truly worthwhile in determining promising areas in streams. Temperature tests in riffles, flats and deep pools afford a fairly accurate picture as to where bass are lurking when stream temperatures generally are in the 80's. Frequently, springs crop up in the stream bed and where such pools are located, it is wise to concentrate plugging activities during the heat of the day with deep riding lures. After all, fish are not unlike humans when it comes to extreme heat and the coolest spots in a stream are often productive of sport. It will be found in early morning, however, that bass and other game fishes may often be cruising about the shallows in quest of food. Frequently, too, especially when the stream is low, spots at the bases of riffles, usually carrying good aeration, are well worth trying.

Paul Boeckel pulls into dock on the lower Susquehanna with the largest bass he caught last year, a 22 inch largemouth weighing 5 pounds 8 ounces. The catch was scored on plug.

A scale finish plug took this 18½ inch smallmouth last season for Britt Butler of Robertsdale in the Raystown Branch.

It may sound like stretching the point, but careful checking of the shoreline may also yield plugging dividends. Observe where spring feeders merge with the main stream. Very often, these feeders may be only trickles from deep seated springs along the shore, but where the cooling water from such springs seeps into shoreline pockets immediately below is often ideal territory in which good bass may lurk. Occasionally on our central creeks, trout streams have their juncture and the cooling water from these feeders is favored by good fish.

When it comes to lure selection in fishing a given area, let depth of water and presence of an abundance (or lack) of aquatic vegetation help to determine your choice. Let us assume that you have approached a wide flat in the stream, ranging from a depth of perhaps a foot at the lower extremity to four feet at its extreme depth. The bottom, let us say, is a mixture of rock, pebbles and near the upper end, sheer rock ledges. The lower end of the flat has a dense growth of vegetation, this vegetation jutting out into the stream channel from both shores from 5 to 15 feet. Deepest part of the flat is immediately below the rock ledge formation at the riffle base. Assuming that light lures, weighing from one-quarter to one-half ounce, are being used, our first concern will be to choose a lure as weedless as possible for fishing the weed pockets in which occasional good bass or pickerel may be lurking. A weedless spoon, weighing one-quarter ounce, should fit into the picture nicely here for a starter. Still shallow water upstream from the weed bed and more open water may call for a straight running lure, with a propeller at one end (or propellers at both ends). Fairly rapid retrieve of this type of lure will serve to keep it well off the bottom in extremely shallow water. Moving upstream, we find that gradually greater depth prevails, and it may be that a thermometer checkup will reveal a spring rising from the stream bed in the vicinity of the ledges. Recalling its location may serve in good stead some day around the noon hour in plugging this flat. Now, in fishing this open and deeper water, a light floating wobbler type plug that darts perhaps one to two feet below the surface will be ideal. These three lures should fit into the situation nicely, with deeper running, sinking wobbler type plugs for occasionally deep pools in which wall-eyed pike may be encountered. Having mentioned wall-eyed pike, it is well to recall in taking these fish in streams that very often the eddy formed at the base of a deep riffle may harbor a school of them. Letting the sinking plug zig-zag well into the depths and retrieving very slowly is excellent procedure here. If pickerel occur in the stream, plug weed pockets along the shoreline carefully and never neglect splatterdock fringed pockets so apparently favored by the pickerel.

August is notably a thunderstorm month and should one of these storms break on the watershed of the stream you happen to be fishing, unusual sport may very often be had when the water is first becoming milky or cloudy. Smallmouth bass are notably clear or clearing water feeders and it may be instinct that prompts them to renewed activity at such times.

Under low, clear water conditions prevailing generally at this time, avoidance to the greatest extent possible of wading in smaller streams is advisable. When wading is resorted to, extreme care should be the rule. Then, too, use of a long leader of synthetic gut, 10 or 15 pounds test, and from 8 to 12 feet in length is a good bet.

This "dog day" fishing has another angle, applying to artificial users and live bait fishermen alike. If there is one thing that sickens a dyed-in-wool bass fisherman it is to have a fine two or three pound game fish spoil before he gets it home that night. And spoil it will, unless reasonable precautions

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BROWNS, BRUNETTES AND BROOKIES

By E. LLOYD KING

ONCE in the not so long ago, the writer offered an article somewhat in similar vein as the present. In addition to the good natured jibes on the part of an acquaintance or so, a day or two later a raucous raspberry arrived in the guise of a telegram reading: "Just what I've always told you. Let the wife and kiddie do the fishing. You're too good a bait snatcher to waste time wearing out flies." It was from an old friend down Delaware way, a cynic who knows only too well that this fisherman is now and for some time has been an ultra strict fly rod purist, although there was the day I dunked winged, crawling and swimming creatures into the drink with right reckless abandon.

It is always hard to live down the past, but fishing is in the blood, a heritage from a wonderful Dad of the long, long ago, a Dad who took his little shaver along as a pal even when the lad could only have been a nuisance and a handicap. That lad has long since grown to manhood and to him fishing is living, almost life itself. A world without fishing would offer an empty horizon indeed.

Six months of the year your correspondent angles at every possible moment, just for the sheer joy of fishing and often it seems of little import whether finny warriors strike or not. Each succeeding year seems to intensify an ever growing reluctance to kill *any* fish. Winter is just the interlude between two fishing seasons, a nameless, fearful, threatening something in the way, a barrier impatiently standing before the promise of another season, a time to while away groping through badly thumbed catalogues and the like, a prison and experiences in reverie and sometimes to be escaped in part by laboriously typing out the living past in some such tale as this.

So humbly begging your indulgence, this fisherman submits another little collection of true life interludes, which to some may seem a bit amusing—however, let me assure you the incidents were anything but funny at the time.

Mountain Madness

Now I'll never forget my first trip for trout. To secure worms I drove 37 miles and back, just a nice little 74 miles round trip. Then ten more miles to the stream in the mountains of Dauphin County.

Then the fun began. Never before having fished for trout or even having seen a real live specimen, the small turbulent stream did not look inviting. However, the inevitable companion insisted there were trout aplenty. He helped to put them in. A ten year old urchin corroborated the statement. My good pal, tried and true, said, "You go upstream; I'll go down" and then disappeared into the wilderness. I was on my own and how, and further suspected with bitter anguish there were more trout down than up, otherwise why did my friend go that way?

Draping some garden hackle on the big bass hook, your narrator started upstream, accompanied by the urchin and a wild looking adult who had just dropped around to investigate the commotion. Both were emphatic the trout were big, wild and rough, and anxious, Oh! so anxious, to accommodate equally anxious fishermen. Good advice was forthcoming in a never ending torrent. My volunteer guides said to let the quiet pools alone, the riffles were the place; besides there were too many roots in the pools anyway and a big one would only tangle up the line. Entirely too considerate of the big one.

Believe it or not, a couple hundred yards above a bridge supposedly marking the deadline of stocking activities, there was a flash on the riffle and a brownie tumbled out on the sandbar. Not having a ruler, my guides were asked to estimate the length of the victim. Both were unanimous "Too small", but it looked a good 8 or 9 inches long to the disappointed me. So back he went.

Ten or fifteen minutes later, there was another swirl and a brookies just about as big flopped on the gravel. Vehemently and solemnly the chorus from the bank decreed: "Just a little one!" Another free fish.

A few minutes more and the same old story; another brownie flashed in the riffle and came out on dry land to look things over. Sadly my mountain friends shook their heads: "Hard luck, Old Pal. No Go!"

This was becoming discouraging, so I headed down toward my friend below the bridge, my human measuring sticks still trailing along amid the thicket on the bank. On the way down, another brownie fell victim to the amateur's worm; just a trifle larger than the other three. There was a gleeful shout from the bush: "Just a leetle small!" Sadly the line was reeled in and your correspondent sought the solace of his boon companion. Making contact I found he had a trout.

"That's too small" yelled I.

"You're crazy," sez he. "that fish is almost 9 inches long. Wanta See?" His rule said yes too. A couple simple, homey mountain boys had just outslicked a city slicker; but perhaps they were conservationists.

Just to make the episode a little mite more intriguing, I met up with the pair later that day. Then they were fishing. They were working the same shallows I had traversed in the morning and had eight or ten trout, nary a one bigger than those released by the old bass fisherman. It is never wise to say what one thinks, especially when outnumbered by a couple of chummy mountain boys, but I'll swear I recognized the glint in some of those finny eyes; blamed if they weren't almost to a certainty the same ones I had caught and let go several hours previously.

Shades of Alfarata

About once a season, friend wife, an excellent fly rod sharpshooter, may be counted upon to singe this angler's face good and red in the piscatorial wars. And how she loves it; how the salt is poured on and then rubbed

in whenever a listener may be found, which most often is just a bit too frequent.

Now this fisherman has never been a hard luck boy when it comes to size. He takes as many fish on the fly rod perhaps as the average fisherman—tho usually if he outscores a companion, the other fellow will turn up with the biggest fish when day is done. Your narrator may have three or four swell specimens, the other only one, but that one is sure to go just a quarter, a half, or a whole inch larger.

One day last season on the Juniata comes to mind. The family in unison was investigating a narrow shelf of ledges, and the Better Half insisted upon going out into the river just a bit farther than looked safe to the old man in fact, she was standing well over waist deep some three-quarters toward the far shore in fast, surging rough water with a rocky, slippery bottom. Once she had fallen, but luckily scrambled to her feet without trouble. I wasn't doing much fishing; I was just hovering about in the background as an unwilling and unwanted lifeguard.

Furthermore, the little nine year old daughter was busily fly tossing in the pools near where we had entered at the now distant shore beside the William Penn Highway, a wee bit too far away for one so young even in shallow water. The masculine one-third of the household wished that the senior feminine one-third would retrace her steps, but you know how it is with females. If only it were good manners and polite to give them a good shaking down now and then—well, you married guys know how it is.

She liked it out there and emphatically said so. Besides sez she: "I know you. This is the best place. You wouldn't be out here if the fish weren't". And that was that! Again she slipped and plunged in over her head. Strategy wherefore art thou? White lies or not, something had to be done. So working closer, says I in my best awe-struck tone: "Say, did you see that big one jumping in there close to Junie for the last fifteen minutes?" "No", ever so sweetly, "and neither did you". Then my little nine year old pal, ever a daddy girl, rose to the occasion. "Yes, Mother", called she, "He's jumping and he's awful big". And now mother was in a quandry; she felt sure we were fibbing, but maybe not, just maybe. Dubiously she looked toward the kiddie, and blamed if just at that moment didn't a nice one plop after a dragon fly not a hundred feet from shore.

Nothing more was necessary, the missus was on her way. Ten minutes later she yelled: "I got him" and Old Dame Fortune started to kick me in the pants. There was a wild, churning commotion going on over there on that ledge, and it was hard to say whether she "had him" or he had her. From a couple hundred yards away, the battle seemed a draw, and it wasn't easy to determine who was doing the most threshing, kicking and splashing around, fish or fisher. Ten minutes or more of this, and old Micropterus Dolomieu, still sullenly fighting, was dragged to the net.

Just about five minutes later, another wild, shrill feminine whoop: "I got him" and "got him" she had, even bigger than the last. What a show that old baby put on; time and again she dragged him in amid a churning swirl of foam; time and again he turned and hurried right away from there. But like the other, he had to tire and finally came to net. And then sweetly, Oh! so sweetly! "I'm sorry I caught both of them, hubby. Too bad you couldn't have gotten one or the other. But I do believe they are bigger than any you caught so far this season, or last, or even the season before that".

Now never trust a woman, especially a fly fishing femme who is out to out-do you in your chosen element. For further orated she: "Henceforth and forever, this will always be my own private pool. Keep your big nose outta it. And don't forget!"

A week or so later, after a pelting shower had driven the two femmes to the car parked out of sight behind some brush, I sneaked a whirl at the pocket. A jolting strike greeted almost the initial cast and your narrator had snagged into one just about as big, maybe even a wee mite larger than the Better Half's pair, and you should have heard the comment as my prize was sheepishly displayed. No it wasn't sunburn on my neck next morning; just the place that verbal dynamite made contact. Old Lady Luck never smiles on me.

Native Brookies

"Never judge a book by its cover" said some humespun wit once upon a time. How true; how true! Fishermen might well apply the same axiom to trout streams, as I've since painfully learned. Perhaps it should be: "Never judge a trout stream by its trickle".

There came the time this fisherman was invited to visit a friend's farm where trout grow wild, free and native, unfettered by stocking or other human ideologies, at least that is what they told me. First inspection of the stream was not reassuring. It is the tiniest of mountain brooks, raising up behind the house, circling down a tortuous briar and thicket laden course, around the garden, past the stableyard, near the sweet corn patch, then meandering through rock studded, vine fringed pools amid the towering hemlocks, scrub oak and deer laurel toward the main stream some three or four miles away. At no spot is the tricklet so wide a man can not leap across easily; some places the flow of water is perhaps only a foot in width and not over six inches deep on the riffles. The tiny pools, usually about stumps, with myriads of roots, vary from twelve to perhaps twenty-four inches in depth, hardly ever larger in diameter than the usual small family dinner table top.

Digging a few worms in the barnyard, a native mountain boy and your correspondent sallied forth, going right to the head spring a few rods behind the house, the lad in a matter of fact tone assuring this skeptic: "There'll be a half dozen trout in our creels before we hit that culvert over yonder", a scant three hundred yards downstream. Naively he said: "What are you tying that leader on your line for? Forget it, all you need is a hook". Incidentally his hook, a snelled No. 4 at least, was tied directly on the end of a piece of Aunt Lydia's linen thread, which served as a line. Not so this fisherman; he tied on at least ten feet of flimsy catguet—catgut that later met up and tangled enthusiastically with every blamed bramble, root, rock, grape vine and what not on that stream. For every minute I spent fishing, about five minutes were consumed in untangling.

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I wuz afishin' fer bass down by the red rock t'uther day an' they jest wuzn't hittin' nohow, so I sez to myself, reckon yuh mite ez well try it fer sunnies, rock bass an' fall fish. Well sir, they wuz a hayfield handy an' it didn't taik long afore I ketched me a prime bunch of yeller bodied grasshoppers, mitey gude bait. An' then by heck, I hed a real circus fer a while. Them sunnies in the flat at the down end jest went plum nuts over them hoppers, an' I ketched half a dozen, keepin' the two biggest thet wuz erbout 8 inches long apiece. Then they wuz a ol' stump along the bank o' the crick thet allus hed a gude bunch o' rock bass erbout it, an' them fellers wuz jest ez keen fer my hoppers ez the sunnies hed bin. Durned ef I didn't ketch a rockie a leetle better'n 9 inches long, a fish no feller needs ter mind puttin' on the string.

Rite below the flat, they's a good strong deep riffle thet cums inter a swirl, an' a furst rate place for fallfish. They hit the hoppers like all git out an' I ketched 5 keepin' the biggest fish, erbout 15 inches long. Shure wuz fun while them fish wuz hittin' almost as much ez ef the bass hed been hittin'. Fer fellers thet want sum fun on days like this, it's a gude thing not ter turn up the nose at sunnies an' sech like. They're rite gamey leetle cusses an' atter all, a lot o' us fisher fellers is still kids at hart.

Seed a yung feller fishin' with one o' them fly rods and leetle spinners in the crick fer sunnies an' fallfish one day last year an' doggoned ef he wuzn't goin' ter town fer fare. Seemed like every time he'd drop thet spinner an' fly in most enny spot he'd pick he'd hev sumthin' on. He sed he wuz usin' a leetle 4/0 colorady spinner an' a yeller fly tied on a number 6 hook. Then he tried a leetle floatin' bug he hed an' durned ef the sunnies didn't hit thet too.

Park Campbell of Millersburg reports an exceptionally fine trout catch from the Big Spring in Cumberland County. John Rumfelt, Millersburg fly tyer, landed a beautifully proportioned and well-marked rainbow trout measuring 19½ inches in length. This is the largest trout reported to the ANGLER from that stream during the present season.

Question: Of our so-called protected game fish, which ones were native to Pennsylvania waters?—J.W.R.

Answer: Just three, the eastern chain pickerel, the Chautauqua muskellunge, and the charr or brook trout. Records indicate that the smallmouth bass was first stocked in waters east of the Allegheny mountains in 1863, a group of Philadelphia sportsmen being responsible for the first planting which was made in the Delaware River. Early records indicate that the bass also was native to Lake Erie and catches of this game fish were made in the vicinity of Erie in the early part of the nineteenth century. The wall-eyed pike or Susquehanna salmon as it is commonly termed in many sections of Pennsylvania is believed to have been first stocked in the Chemung River, New York State, by a Jesuit priest and an Englishman about 1800. From the original planting in the Chemung, the fish rapidly spread southward in the Susquehanna River. The rainbow trout is believed to have been first brought in from the Pacific Slope around 1879 and the brown trout from the original shipment from Germany was first received at the Corry hatchery in Erie County in 1886.

Question: Where can I get a good practical book or pamphlet on stream improvement?—E.T.

Answer: "Method for the Improvement of Michigan Trout Streams", a bulletin prepared for the Michigan Department of Conservation by the Institute of Fisheries Research, University of Michigan, is one of the finest treatises on trout stream improvement that has come to our attention. It was prepared jointly by Carl L. Hubbs, John R. Greeley and Clarence M. Tarzwell of the Institute Staff. While Michigan trout streams differ somewhat from most Pennsylvania trout waters in that they are low banked as contrasted to our high banked streams, many of the devices illustrated and explained in this bulletin prove very practical for stream improvement work here.

Question: Is a license necessary in hunting snapping turtles?—F.D.

Answer: While the Fish Law makes no provision for devices in taking snapping turtles, nothing can be used in the way of devices in our inland waters except two rods, two lines and one handline, with not more than three hooks attached to each line and the fisherman must be present when using same. Hook and line fishing requires that the fisherman must have a license.

Question: How is the Royal Coachman as a bass fly?—J.R.

Answer: One of the best. Fished behind a 1/0 or 2/0 spinner it is a mighty effective pattern for stream smallmouths. Hook sizes 2 to 4 are good.

Question: Does the Fish Law class the terrapin as a turtle?—M.R.G.

Answer: The terrapin or red leg, which has a rather limited range in central and south central Pennsylvania, is classified as a terrapin and not as a turtle under the Fish Law. The season in which the species may be legally taken runs from November 2 to March 14, Sunday excepted. No size limit is specified, the daily limit is five terrapin and the season limit fifty. Both dates in the season are inclusive.

Question: In what year was the first Pennsylvania fishing license issued?—K.R.

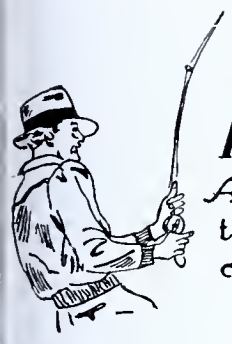
Answer: 1922.

Question: In taking suckers or chubs to be used as bait may a net be used?—F.A.G.

Answer: Suckers and chubs are classified under the Fish Law as game fish, and it is specified that in taking game fish, hook and line must be used.

Question: When does the so-called eel run occur? Do eels have scales?—B.W.

Answer: Eel wall fishermen usually anticipate a heavy run of the species in the fall "when the leaves are heavy on the water" and coincident with a rather sharp raise in water levels. Usually, this time is about October. To all appearances, running eels seem to roll with the current and at times when the run is at its peak, the racks have been known to overflow in a single night. Eels are known as Catadromous fish, fish that run from fresh to salt water to spawn, and the spawning site for both the American and European species has been definitely placed in the Carribbean Sea. After the adult eels have spawned, they die and the young start their long return journey to fresh water. It is thought that the sexual organs in the adult eels develop after they have entered salt water, and that only about one out of every ten eels in our streams ever feels the spawning urge. Eels have microscopic scales deeply embedded in the skin. In order to run an eel wall, a special license is issued to the operator by the Department of Revenue at a charge of one dollar.



MIDDLE ATLANTIC
ASSOCIATION OF CASTING CLUBS

An association of sportsmen's clubs formed to promote tournament casting, encourage organization among anglers assist in conservation; and support all moves toward true sportsmanship.

SEVERAL thousand spectators crowded around the beautiful lake at Willow rove Park to view the events of the third nual championship casting tournament on nday, June 9th. For the first time at any ajor tournament surf, fly and plug events ere run off simultaneously and some of the est amateur casters in the East partici- ted.

One hundred and fifty casters representing irteen casting clubs, all member clubs of e Middle Atlantic Association, furnished me very keen competition. The Willow rove Park trophy offered by the park anagement to the club amassing the great- t number of points in all of the events fur- shed an incentive that kept every caster edge.

The trophy, a large walnut plaque over vo feet in height, displayed a solid silver ield with an inscription of the tournament, ove which stood a plug caster in action. is plaque was won by the Pennsylvania State Fish and Game Association with fifteen points to their credit out of a possible thirty-six. Their closest contestant was the Dover Fishing Club whose casters took over everything in the surf casting events for a total of twelve points. The Lower Merion Rod and Gun Club, Inc., gave the best exhibition of good all around casting by taking prizes in every one of the six main events.

Willard and Ralph Bowman, left to right, of Bywood, who placed second and first respectively in the two surf casting events at the Middle Atlantic casting tournament this year. Ralph established a new long distance surf casting record of 578 feet 10 inches for the eastern states.

Individual honors of the day went to Ralph Bowman of the Dover Fishing Club with a total accumulation of six points, the most won by any single caster.

The outstanding spectacle of the tournament happened on the surf casting court, adjacent to the lake, when Ralph Bowman put every ounce of muscle at his command in back of a heave that sent the four ounce lead out 578 feet 10 inches from the base line. This broke all existing Eastern records by 8 ft. 10 in., and the Middle Atlantic record by over 48 feet. Bowman also made an average of 548 feet for the day's casting which is also a new high.

Another feature of the tournament was the casting of Harold G. Lentz who back in 1922 set a world's record in surf casting with 465 feet. At this tournament, just eighteen years later, he was casting even better with a toss of 468 feet, 11 inches. Casting must be the secret of eternal youth.

Although the casting was consistent in the fly and plug events there were no outstanding casts made or any records broken. This is probably due to the restrictions placed on equipment by the rules committee by outlawing special light tackle such as is always used by the expert tournament caster and frequently by the finished angler who combines the ultimate in sportsmanship with his fishing. An example of this was the ⅝-ounce plug distance event that was won by B. Berlinger with a cast of 193 feet 6 inches.

In making this cast he was compelled by the rules to use a nine pound test line, the same test line that is used by the surf caster in tossing a four ounce lead over 500 feet. Had a light weight tournament line been permitted in this event, Mr. Berlinger would undoubtedly have added 100 feet to his cast. This would have added a little *big league* color to the event.

The results in the six principle events of the tournament were as follows:

Surf Distance—First R. Bowman; second, W. Bowman; third, H. Lentz. 578 feet, 10 inches.

Surf Average—First, R. Bowman, second W. Bowman; third, H. Lentz. 548 feet.

Fly Distance—First, C. Stocker; second, F. Krebs; third, R. Nierle. 72 feet.

Fly Accuracy—First, E. Weigeman; second, J. Vandergriff; third, A. Clark. Score 84.

⅝ Plug Distance—First, B. Berlinger; second, A. Clark; third, C. Stocker. 193 ft. 6 in.

⅝ Plug Accuracy—First, E. Jenkins; second, G. Degourge; third, C. Leisey. Score 91.

Carl Leisy of Mantau, N. J., ardent plug caster with the 8 pound largemouth bass he took on a lure last season. He is a member of the Gloucester County Game and Fish Association.

Bronze championship medals were awarded to the high man in each of the above events and over seventy beautiful merchandise prizes were awarded by the percentage system of handicapping.

Branch Valley Fish, Game and Forestry Association

Raymond Betts, of Perkasie, represented the Branch Valley Fish, Game and Forestry Association among the winners at the Middle Atlantic Association of Casting Clubs

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Ernest Jenkins, ardent Narberth sportsman.

MONTGOMERY CLUBS HEAR STOCKING REPORTS

The Montgomery County Federation of Sportsmen's Clubs held its quarterly meeting in the Fire House on Butler Avenue, Ambler, where the Federation delegates were guests of the Wissahickon Field and Stream Association. The latter association served refreshments after the business meeting to 75 members and delegates from the clubs of the Federation.

President William Stoneback of Colmar, who is also President of the Lansdale Sportsmen's Club, presided at the meeting, while the Secretary, Leroy B. Seasholtz of Gilbertsville, from the Douglass Rod and Gun Association, and the Treasurer, William Ellis of Bridgeport, from the Montgomery County Fish and Game Protective Association. were also in attendance and gave their respective reports for the quarter ending last evening.

The chairman of the Federation's Game Committee, Russell Krupp of Schwenksville, from the Perkiomen Valley Sportsmen's Association, told the meeting that, of the 554 six-weeks-old pheasants received last year from the Pennsylvania Game Commission to be raised in the Federation pens at the Eastern State Penitentiary, only eighteen were lost before reaching maturity; while the remaining 536 of these pheasants were raised to maturity, distributed to the member clubs of the Federation on March 9th of this year and liberated throughout Montgomery County on ground which is open to public hunting. Mr. Krupp informed the meeting that feed for these pheasants cost approximately only 46c per bird to raise to maturity. When liberated their value was $2.49 per bird. Mr. Krupp further reported that 68 of the 86 six-weeks-old quail which were also supplied to the Federation by the Pennsylvania Game Commission had been raised to maturity at a total cost of approximately 34c per bird. The quail, also, were distributed to the members clubs of the Federation and have been liberated on ground in Montgomery County which is open to public hunting. The Federation's Game Committee, said Mr. Krupp, has requested the Pennsylvania Game Commission to supply this Federation with 500 six-weeks-old male pheasants and 80 six-weeks-old quail, to be raised this year in the Federation pens at the Eastern State Penitentiary, Graterford.

Montgomery County Game Protector, Ambrose Gerhart of Souderton, a member of the Souderton Game, Fish and Forestry Association, supplemented Mr. Krupp's report with a summary of the total game trapped during the past spring months in Montgomery County as follows: 765 rabbits, 134 male pheasants, 481 hen pheasants, 661 gray squirrels, 11 raccoons and 9 quail. Mr. Gerhart added that the figures for the total game stocked this spring in Montgomery County (including that which was distributed direct from the Pennsylvania Game Commission's Game Farm, as well as that which was raised in the Federation's pens at the Eastern State Penitentiary and that which was trapped under Mr. Gerhart's guidance), were as follows: 1505 male pheasants, 634 hen pheasants, 491 quail, 350 gray squirrels, 16 raccoons and 1581 rabbits, making a grand total of 4,544 head of game.

Montgomery County District Forester, E. F. Brouse of Norristown, who is a member of the Montgomery County Fish, Game and Forestry Association and Chairman of the Federation's Forestry Committee, notified the delegates last evening that 1425 healthy young trees will be distributed this week from the Federation's nursery to each of the member clubs of the Montgomery County Federation of Sportsmen's Clubs. All except three of the member clubs, said Mr. Brouse, have expressed their desire to accept their quotas of these trees for planting in their respective territories. Planting instructions and nursery inspection tickets will accompany each set of trees, which will include the following species: Scotch pine, Norway spruce, white pine, larch, persimmon, oaks (mixed) butternut and shellbark.

Allentown Call Photo

Plenty of competition here as anglers invade the Little Lehigh in Lehigh County on opening day of this year's trout season.

Harry Z. Cole of Norristown, Fish Ward of Montgomery County and a member of t Montgomery County Fish, Game and Fo estry Association, as Chairman of the Fe eration's Fish Committee, told the meeti that the Fish Commission had decided to fe tilize the five propagating ponds of the Fe eration in accordance with the plans su gested by the Alabama Agricultural Expe mentation Station, as printed in a rece issue of the "PENNSYLVANIA ANGLEF It was further decided by this Committee request the Montgomery County Sportsme Park Dam, at Green Lane, he said, be stock with sunfish, catfish, suckers and smallmou bass, as well as to hire labor to repair t existing leaks in the dams of the two pr pagating ponds on the Beidler Farm. At M Cole's suggestion, the meeting of the Feder tion voted last evening, too, that its Secr tary should request the Pennsylvania D partment of Forests and Waters to issue permit allowing the Federation to repa Musselman's Dam in accordance with pla approved by the United States Army E gineer and the W. P. A. Administrator.

Howard C. Shallcross of Graterford, fro the Perkiomen Valley Sportsmen's Associ tion, added that sometime within the ne future members of the Pennsylvania Fi Commission will come down from Harr burg to the Montgomery County Sport ment's Park to confer with representativ of this Federation in order to make defini plans for stocking of the waters above a below the dam. Charles Hughes of Norr town, also from the Montgomery Coun Fish, Game and Forestry Association a Chairman of the Park Committee of t Federation, extended to the delegates of t Federation the invitation of the Montgome County Park Commissioners to the effe that any sportsmen's organization which m desire to hold outings or picnics on the Pa grounds are welcome to do so. "This is t Sportsmen's Park", Mr. Hughes again to the Federation.

Additional events being planned by t Ways and Means Committee of the Feder tion, Mr. Ruth announced are: a Spri Picnic, held on Saturday, June 22nd in t Montgomery County Sportsmen's Pa Green Lane, and the Federation's Annu Clam Bake, which is scheduled for Sa urday, September 7th, also in the Mor gomery County Sportsmen's Park. The Cla Bake last fall was a most successful or which was attended by 500 sportsmen a their families.

Howard Shallcross, who is also one of t two delegates from the Montgomery Coun Federation of Sportsmen's Clubs to the mee ing of the Southeastern Division of the Sta Federation of Sportsmen's Clubs, told tho present last evening about the recently-he quarterly meeting of the Southeastern D vision, which recommended to the State Fe eration that a number of further changes made in the present game and fish law Among the changes recommended, Mr. Sha cross said, were: that the red fox be plac on the "bounty list"; that groundhogs be pr tected to the extent that each hunter be pe mitted to take only two per day; that fif cents be added to the Pennsylvania fishi license and that the revenue obtained fro the increase be allocated to the procuring additional land and to improvement streams throughout the State.

In Memoriam

By Ross L. Leffler

JUDD C. TURNER

Would that we could be like you,
Always cheerful, pleasant, true.
Your life too full of helpful service,
To find place for complaint or malice.
With unselfish devotion your tasks pursued,
Calm, patient, with strange powers endued,
Who ever keenly and sympathetically knew
The trials that beset we humans so.
Long after material things have gone,
Such sterling traits in man live on.

—Chas. F. Stambaugh.

•HE members and employes of the Game Commission, and thousands of sportsmen roughout the Commonwealth, will be a ng time recovering from the shock caused the untimely death on May 4 of Judd C. urner, Assistant Executive Director of the ommission. Hundreds of others will likeise deplore the passing of this lovable pernality. He was a benefactor of many, and cause of his amicable disposition and his usual ability to understand people, he won everlasting place in their affection and teem. Striking evidence of these humanirian qualities came to light in the eulogy esented during the funeral services held at s home Church in Ellwood City. Therein as emphasized his love for young people, r the poor and the oppressed, his civic ide and devotion to duty, and a multitude other attributes. Notwithstanding the hing void in the hearts of his bereaved fe, daughter, and friends, the Commission d its entire staff will long remember his er vigilant helpfulness, his cheery smile d ready wit.

Mr. Turner was born at Sandy Lake, Mer-r County, October 5, 1879. In his youth he as widely known as a baseball player roughout Pennsylvania. For many years was engaged in the steel industry, having en employed in various capacities by the National Tube Company, the Standard Engineering Company, and the Etna Engineering Company. He held an important executive position with the latter company at Ellwood City for a number of years prior to coming to Harrisburg.

He was long active in civic affairs in western Pennsylvania, having served as a member of the Lawrence County Executive Committee, Boy Scouts of America, President of the Northwest Division of the Pennsylvania Federation of Sportsmen's Clubs, and in numerous other capacities.

He was a member of the Presbyterian Church; the Ellwood Lodge 599, Free and Accepted Masons; Pennsylvania Consistory, 32nd degree, Zem Zem Temple Shrine, Erie; the B. P. O. E. No. 1356, Ellwood City; an Honorary Member of the American Legion; and numerous other organizations.

Funeral services were held in the First Presbyterian Church, Ellwood City, burial taking place in the family plot in the nearby Wurtemburg Cemetery. Field Division Supervisors of the Commission in full uniform acted as pallbearers, with members of the Commission and its staff, and other long-time associates and acquaintances, acting as honorary pallbearers. Last rites were administered by members of his Masonic fraternity.

(Pennsylvania Game News)

SPORTSMEN PLANT TREES IN MONTGOMERY

Several score of sportsmen throughout ontgomery County are busily engaged in anting trees and shrubs grown in the tree irsery sponsored by the Montgomery ounty Federation of Sportsmen's Clubs, cated at the Eastern State Penitentiary, raterford. Tree planting represents one of e major activities of the clubs according the sportsmen. They not only provide me, food and cover but help protect the reams by conserving the moisture and reicing or eliminating soil erosion. The nurry has been in operation for three years d it is said to have arrived at full producon this year. Twenty thousand trees and rubs are being distributed equally to each ember club for planting in its own area. All this stock was grown from seed and is om 1 to 3 years old and from 8 inches to feet in height.

Among the species now being planted are ks, shellbarks, hazlenut, persimmon, white ne, Scotch pine, Norway spruce and larch. n effort is being made to have the trees t out in wild land in groups of at least 250 acing the conifers in the center of the plot d the hardwoods on the exterior. The nifers are spaced about 6 feet apart each ay and the hardwoods 20 to 25 feet so that ey will have an opportunity to develop to fruit and seed bearing trees.

The announcement was made that the folwing clubs are participating in the proam:

Boulder Valley Sportsmen's Association, hn Breyer, R. D. 1, Green Lane; Bucks Co. Coon Hunters Association, Russel Kober, Chalfont; Douglas Rod & Gun Club, Sylvester Eisenhart, Gilbertsville; Huntington Valley Sportsmen's Association, Raymond Murray, Huntington Valley; Lansdale Sportsmen's Association, Ross E. Zander, Lansdale; Lower Merion Rod and Gun Club, Henry Hopkins, Narberth; Montgomery Co. Game, Fish and Forestry Association, E. F. Brouse, R. D. 2, Norristown; Perkioman Valley Sportsmen's Association, Raymond Landis, Yerkes; Royersford Hunting & Fishing Club, Donald Miller, 4th & Spruce Sts., Royersford; Souderton Game, Fish & Forestry Association, John Ziegler, Diamond St., Souderton; Tri-County Sporesmen's Association, Fremont Keim, Pleasant View Rd., Sanatoga; Upper Providence Game, Fish & Forestry Association, Joseph Dietrick, Oaks, Penna.; Upper Perkiomen Sportsmen's Association, Robert Smoll, Red Hill; Wissahickon Field & Stream Association, F. L. Streeper, Sr., Ambler.

The sportsmen believe there are hundreds of acres in the northern part of the county that might well be devoted to such planting and they further share the opinion that by planting twenty to twenty-five thousand trees a year an excellent showing will be made over a period of years. The fishermen are entnusiastic about this long term program for they are confident that ultimately the Perkiomen and Skippack Creeks particularly are going to become better fishing streams. They point out that now both run muddy for a week or more after nearly every heavy rain.

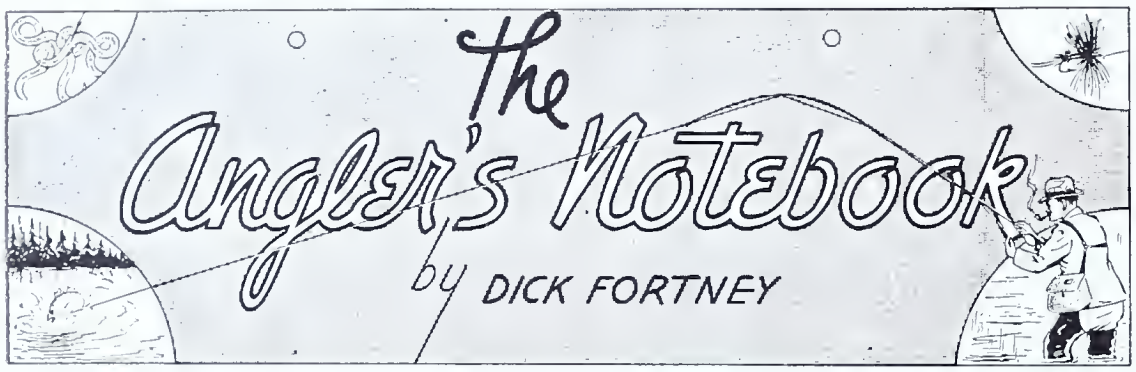
The agricultural class of the East Greenville Vocational School is assisting with the planting in the upper part of the county and the Boy Scouts are helping to set out the trees alloted to the Souderton Game, Fish and Forestry Association.

Announcement was made also that the Junior Sportsmen's Club connected with the Worcester School will plant 1500 trees supplied by the Montgomery County Game, Fish and Forestry Association and the boys of the Hatfield Vocational School are setting out 3,000 furnished by the same club. These plantings supplement the Federation activities, it was said.

BOARD OF INQUIRY FOR GREAT LAKES FISHERIES

From the State Department comes an announcement welcome to members of the Izaak Walton League and others who for years have been concerned with the vanishing fish resources in the Great Lakes. On February 29, Secretary of State Hull and Loring Christie, Canadian minister signed "an exchange of notes establishing a board of inquiry for the Great Lakes Fisheries."

It is the aim of this board to "make a study of the taking of fish and will submit recommendations as to methods or preserving and developing the fisheries." It will not have regulatory powers.



GRASSHOPPERS and crickets are good black bass baits. Try them when a brisk wind is blowing, and fish from the windward side of the stream. The fish think that the breeze has blown them into the water. Most anglers use them as surface baits. Small hooks should be used.

Five color combinations are recognized as excellent black bass lures in the bucktails. They are plain white hair; black and white hair in two layers; yellow and brown hair in two layers; plain fox squirrel, and red and white hair in two layers.

A line which has been used for a long time is not to be trusted. It should be carefully tested, and weak portions broken off until a length of good, strong line remains. Occasionally during the season turn the line on the reel, so that the same end is not in use in the water all the time and so the line wears evenly.

Don't neglect the tiny black bivisible dry flies for late season trout fishing. They may be difficult for the angler to see, but trout are quite likely to be looking for just such kinds of insects to be on the water.

Spinners are among the most useful of all fishing tackle, being used with either worms, minnows, or flies. A guide for spinner sizes: For panfish, No. 0; for brown and brook trout, No. 1, and for bass and rainbow trout, No. 2 or No. 3.

Many fishermen think that flies which are frayed and tattered make the best lures. Did you ever notice that trout frequently will ignore a fly that has fallen into the water but will eagerly snap up another that has been dead for some time and which is bedraggled and motionless? Some day, when the fish scorn all the flies you offer, tear one up a bit, make it mussy, and cast it.

Renew flies by holding them with a forceps in the steam from the spout of a kettle and then brush the wings and hackle with a very soft toothbrush.

These cheap repair kits that are on the market for patching inner tubes are just the ticket for minor boot and wader repairs. In patching a snag or a cut, first scrape the surface clean of all dirt. Apply a coat of cement and allow it to dry. Then apply another coat and allow it to become tacky. On this place the patch, pressing it down firmly all over. A round patch, incidentally, will stay in place much better than one which has several corners.

Bass seen feeding at or near the surface of the water often ignore live bait. But at the same time they freely take a fly fished either wet or dry. Large patterns of trout flies are effective in such instances, but small ones also can be used, for bass can be hooked just as easily with them as with the larger lures.

If you were a minnow, you would tremble in your boots at a sight like this — the wide gaping mouths of three black bass. No wonder, is it, that casting lures bring results in bass fishing and that bass are regarded as among the gamest of fresh water fishes?

Don't try to cover too much ground when fishing with plugs, bugs, or other artificial lures for bass. A score or more casts may be necessary to arouse the anger of a he-man bass and make him strike. A lure cast repeatedly in one spot often even will bring a strike from a fish that is not feeding at all but which is annoyed by the lure.

An all-night rain often will cause a rise in a stream in the summer. Then is the time to fish with streamers and bucktails.

A bass often will trick an angler using a fly or light plug. When the lure falls into the water the bass, if it is the least bit doubtful of its genuineness, will flash past the fallen object and strike it a blow with its tail. Unless the fisherman is a keen observer, he will mistake this action for a real strike.

A small hook attached to a bass-size pork rind lure is good for catching pan-fish.

A little piece of red cloth, well trimmed and fastened to the head of a spoon, makes the lure more attractive.

Imitation worms, helgramites, and crawfish mounted on hooks can be bought, but they must be kept moving in the water.

The wise bass angler confines his efforts to the early morning hours and from sunset until dark. These are the times of the day when fish feed in warm weather.

A casting reel should be filled to within a quarter inch of the cross-bars. The line swells when wet, and a reel that is too full will cause trouble. A half-filled reel, on the other hand, means a greater number of backlashes.

The bearings of a bait casting reel should be oiled every few hours while it is in constant use.

Strikes cannot be expected on spoons and spinners that have become dull, and fish cannot be held on hooks which are rusted. It is the flash of the spoon or spinner that attracts fish. The needle-sharp points are put on hooks for the express purpose of driving deep into the jaw of a hooked fish.

Here are average sizes for hooks for black bass flies: For small, clear streams and small or moderate-weight bass, No. 6 or 8; for the same streams if roiled, No. 2 or 4; for clouded waters, wind-swept lakes, and streams of good size, No. 1 and 1-0.

Friend: "I see you are driving a new car."
Insurance Agent: "Yes, I tried to sell an insurance policy to an automobile salesman."

NORTHWEST DIVISION HOLDS SPRING MEETING

The regular spring meeting of the Northwestern Division of the Pennsylvania Federation of Sportsmen's Clubs was called to order in the club house of the Kalbfus Rod and Gun Club near Clarendon in Warren County, by Chirman F. M. Gear.

Roll call reported Vice Chairman Raymond H. Armstrong and Secretary Seth L. Myers, present with Treasurer N. C. Mills absent.

All counties reported present excepting Erie and Forest.

Mr. G. W. Alexander, alternate delegate from Clarion County was seated in the absence of Dr. N. C. Mills.

Mr. Merle Bideaux was seated as the new delegate from Crawford County upon advice of the secretary that his credentials had been forwarded prior to the meeting. Mr. Bideaux was introduced by the Chair.

The Chair then called the meeting back to order and instructed the secretary to proceed with the reading of the minutes.

During the reading of the minutes the Erie County delegate, Dr. J. J. Koehler arrived and was seated at the board. The Chair asked if Erie County wished the secretary to begin over with the reading of the minutes, and was advised that it was not desired. The minutes were approved as read.

Several letters from member clubs were read and discussed, pertaining to the note printed on the State Federation Certificate which advises that the certificate is void after Februray 12, 1940.

The secretary was instructed to advise all clubs that they are in good standing, with dues paid from now until the next annual convention.

A letter was read on the annual destruction of fish in Lake Erie and the Chair asked Dr. Koehler for his opinion.

He advised that every year millions of small fish are destroyed by commercial fishermen and that it has become a public nuisanse in late summer from the odor produced by dead fish. He stated that at one time the City of Erie rated as first as a commercial fishing harbor for fresh water fishing but at the present has dropped to ninth, and that it was about time that some sort of a ruling be made to govern the wasting of fish.

Randall McCain, Federal Asst. Range Examiner of the Allegheny National Forest spoke on the rearing of fingerlings for the forest waters and presented a map of 736,000 acres included, of which 436,000 acres are owned by the National Forest. He pointed out many valuable phases of the work being done and discussed the deer food problem.

It was reported by Clarion County representatives that the reason Dr. Mills was absent was due to an auto accident the evening before, but that he was not seriously injured.

Crawford County extended an invitation for the September meeting.

May: "That old star is trying very hard to recall a face."

Fay: "You mean she's working her memory overtime?"

May: "No, I mean she's working her cosmetics overtime."

AWARD FISH PRIZES AT LEHIGH MEETING

Colored motion pictures of fishing and hunting in Canada and the surprise bestowal of a gift on Charles H. Nehf, association secretary, were highlights of the annual meeting of the Lehigh County Fish and Game Protective Association.

Nearly 700 members attended the meeting and program held in the Allentown High School auditorium.

Victor Cody, New York state resident and one of the country's outstanding sports cameramen, showed and described the movies on Canada.

Nehf, editor of the "Field Sports" column in the Allentown Morning Call, was given an electric roaster in recognition of his work to the association.

Speakers included: R. A. McCachran, assistant chief of the division of lands, Pennsylvania Game Commission; Charles A. French, State Fish Commissioner; C. Joel Young, Fish Warden; William A. Moyer, Game Protector; Paul Zimmerman, membership committee chairman. The Rev. Carl E. Neudoerffer conducted memorial services.

Fish Prizes

Awards for the 1939 fish contest, all entries of big fish being backed by affidavits were:

Brown Trout—The only contestant was Charles H. Long of 109 East Elm Street, Emmaus, who was awarded a fishing jacket, donated by F. D. Wieland, Bethlehem, for a fish 20 inches long; girth, 11 inches; weight, 2 pounds 12 ounces; caught June 4, 1939, in the Little Lehigh creek; lure, yellow fly.

Smallmouth Bass—Alex Stratford, 1319 Liberty Street, a level-winding reel, the gift of the association, for a fish 19 inches long; girth, 12 inches; weight, 3 pounds 8 ounces; caught October 21, 1939, in Maiden Creek; lure, Heddon river runt.

Largemouth Bass—First prize, E. E. Laudenslager, 842 North Ninth Street, for a fish 20 inches long; girth, 13½ inches; weight, five pounds; caught, July 21, in Lake Wallenpaupack; lure, plug. The prize was a steel casting rod, donated by the M. C. Ebbecke Hardware Co. Second prize, Rudy Hassler, 939 Cedar Street, for a fish 19 inches long; girth, 13½ inches; weight, 4 pounds 2 ounces; caught September 24 in Brown's Lake. Lure, plug. The prize was a portable refrigerator, donated by the Allentown Sporting Goods house. Third prize, Elwood S. Adams, 1623 Turner Street, an Ashaway casting line, the gift of the association, for a fish 18½ inches long; girth, 13½ inches; weight, 3 pounds 12 ounces; caught August 26, 1939, in Naomi Lake, lure, minnow.

Wall-eyed Pike—Allen S. Kline 1422 Gordon Street, a tackle box, the gift of the association, for a fish 19½ inches long; girth, 9½ inches; weight, 2 pounds 7 ounces; caught July 1, 1939, in Lake Wallenpaupack; lure, plug.

Pickerel—Earl H. Burger, 628 Greenleaf Street, a steel casting rod, donated by C. Y. Schelly & Bro., for a fish 28¼ inches long; girth, 12¾ inches; weight, 5 pounds 9 ounces; caught July 13, 1939, in Peck's Pond; lure, minnow.

A PLEDGE

Mother nature you are kind to me
You fill my life with endless glee.
So with indebted gratitude I'll retaliate—
I'll take your fish at a moderate rate.

I'll destroy every net and every snare.
And like my Fellow-Sportsmen shall be fair;
And with a, "Hi-ya pal, how'er they bitin'?"
I'll help you with your undaunted fightin'.
To make some Fishermen realize—
That a limit is not always considered a prize.

And if I wade a stream disappointed,
I'll stroll back home with content anointed.
Thus, Mother Nature, I'll do my part.
I'll remember you deep in my heart.

—Michael Paul Daniels.

Albert G. Shimmel of West Decatur, whose splendid illustrations have been featured frequently in this magazine, depicts a white tail buck on a buck skin. He is an ardent sportsman and secretary of the West Decatur Fish and Game Association.

BUCKTAIL FISHING

(Continued from Page 3)

the habit of a slow retrieve, and from then on, few fish will be lost.

And now to make this article complete suppose we try our luck in tying the Edson Dark Tiger,—a fly which is slightly more complicated in construction than the Alaskan described above.

Place a long shanked hook in the vise, and with well waxed tying silk, (size 00, about 15 inches long), start winding over its own end about an eighth of an inch back from the eye, see Fig. 4.

Continue winding roughly out to the bend where a few fibres from a Lady Amherst tippet should be bound down and fastened with the tying silk, see Fig. 5.

At the same time, fasten in, or bind down, a piece of heavy yellow chenille, flue of which has been removed for a short distance near the end. I might add that fastening in any material is in all cases accomplished by binding it down on the hook shank with a few turns of the tying silk. Don't get the impression that it is necessary to fasten it with a knot or half hitch, for such refinements are useless, unnecessary, and take up considerable time. The only fastening knot necessary in any fly is the whip finish tied in at the last operation. Now before the body is formed, we must move the tying silk up near the eye of the hook, where it will be conveniently at hand to secure the chenille. Fig. 6 represents the fly at this stage with the tying silk moved forward. To keep it from unwinding, the hackle pliers are clipped to the free end, their weight holding it taut. Throughout the operations of building up a fly, these hackle pliers should be left clipped to the tying silk, so that the hands are free to work on any other part.

Now build up the body, by winding on the chenille in close even spaces. When near the eye, fasten it with a few turns of the tying silk, then cut off the excess end, see Fig. 7. My usual practice in tying flies is to make a number of the same pattern; and quite a bit of material can be saved in this way, as in the instance of the chenille, by originally cutting off a length around a foot long, which is sufficient for making a number of bodies.

At the throat, we require some bright red or scarlet hackle, which is fastened in on the underside. This may be the tip of a scarlet hackle, or a number of long fibres sheared off near the butt. Fig. 8 shows the construction of the fly at this stage with the hackle fastened in.

From the center of a deer's tail detach a tuft of long brown hair, approximately equal to an eighth of an inch in diameter, and about one and half times the hook in length. Shake out the short fine pieces near the base, then swab the butts of hair with lacquer cement. Hold the hair immediately above the hook shank, then secure in position with a few turns of the tying silk. The construction of the fly up to this stage is shown in Fig. 9.

Select two Jungle Cock feathers of the same size and length and fasten these in, one on each side as shown in Fig. 10. We have still a free length of tying slik, which must now be fastened off with the whip finish*. After this operation is performed grasp the free part up close to the knot, then tear off the excess end. Finally place a drop of lacquer cement on the head, and the fly, Fig. 11 is finished.

In general, the methods outlined above should serve as a foundation in tying and fishing bucktails. Learn to construct your own lures; study various methods of retrieving them, and some day you'll tie into an old lunker that will literally rip the rod out of your hand. Here's Luck!

* Figs. A, B. AND C, show the tying of the whip finish. In Fig. "A" grasp loop at point "x" and make four (4) turns around the hook shank binding down the free end at each operation. Slip the dubbing needle in the loop, Fig. B; grasp the free end and pull it tight over the needle.

SOUTHEAST DIVISION ASKS FOX BOUNTY

The May meeting of the Southwest Division of Sportsmen's Clubs was held at the cabin of Hon. Ross L. Leffler.

The following officers and delegates answered roll call: Chairman Reed, Treas. Menzemer, Sec. Yake. Delegates: Armstrong, King; Allegheny, Menzemer; Beaver, Crawford; Washington, Hollowood; Somerset, Critchfield; Westmoreland, Achtzehn; Greene, VanClove; Fayette, Hess; Indiana, Stahura.

Chairman Collin Reed reported a successful National Wildlife Federation Convention in Washington, D. C. He reported Stamps and Folders were purchased and distributed to the various county units. He asked for suggestions as to how the stamps may be better disposed of next year, as many difficulties were encountered this past year.

Secretary's Report

Your secretary attended the Somerset County Banquet on May 2nd. All communications were answered promptly. He was appointed a member of the Constitution and By-Laws Revision Committee of the Westmoreland County Sportsmen's Association.

A letter from Dr. C. A. Mortimer, Secretary-Treasurer of the Pennsylvania Federation of Sportsmen's Clubs, was read concerning the minutes of the Federation meeting in February, at Harrisburg and also the proposed changes in the Federation Constitution.

A communication from the East Forks Sportsmen's Association regarding a donation for the purpose of fighting pollution was also read.

A copy of the Federation Constitution was sent to Vice-President M. C. Merritts of Altoona, Pa.

It was reported that the Allegheny County Sportsmen's League was unsuccessful in securing the 1941 Convention of the National Wildlife Federation.

Moved by Hollowood, seconded by Van Cleve, that a moment of silent tribute be observed in memory of the passing of Judd C. Turner, Assistant Executive Director of the Game Commission and that the following resolution be adopted.

WHEREAS, The Almighty in His infinite wisdom has removed one of the Administrative Staff of the Pennsylvania Game Commission: Judd C. Turner

WHEREAS, His passing will be keenly felt by that body, and

WHEREAS, Our loss is his gain; and

WHEREAS, His loyalty, integrity and devotion to duty won for him a place in the hearts of all sportsmen

BE IT RESOLVED, That an expression of sympathy be extended to the bereaved family; and

Courtesy Reading Times.

These officers and directors of the Berks County Chapter, Izaak Walton League of America, are engaged in leading members through one of their busiest years in history. Front row, left to right: John D. Rothermel, chairman of the Board of Directors; Clement Parlaman, vice president; John P. Deck, president; Harvey Adams, treasurer, and Alfred A. Ramm, Jr., secretary. Back row: Directors, Byron B. Mortimer, education; Levin D. Schearer, woods; Ralph E. Walley, program; Albert Green, waters; Oscar A. Becker, membership, and Harold C. Marbarger, wildlife.

BE IT FURTHER RESOLVED, That a copy be sent to the Pennsylvania Game Commission and Game News.

Crawford and Beaver County introduced a resolution recommending that Beaver County be included on the list of counties in which the Game Commission decided to pay a bounty on the Red Fox. After considerable discussion it was moved by Stahura and seconded by Crawford that the entire Southwest Division be included, if found by the Commission to be necessary. Motion carried.

Moved by Stern, seconded by Hollowood, that a rising vote of thanks be given to the host, Hon. Ross L. Leffler, for the fine hospitality extended. Motion carried.

At this time the meeting adjourned for a delectable lunch, served under the direction of Mrs. Leffler. Following the lunch the meeting was called to order and remarks were in order.

CHARLES FRENCH, Fish Commissioner

Mr. French thanked the division for the fine cooperation and stated we received more fish in the past several years than at any time previous. Mr. King asked about the stocking of Crooked Creek and was told that fish have already been stocked. Mr. Critchfield discussed the stocking and fishing of the waters on Federal Government property near Trent. Upon motion by King, seconded by Hollowood, the secretary write to John C. Youngman, President of the Pennsylvania Federation of Sportsmen's Clubs, Williamsport, Pa., asking him to write Charles Jackson, Acting Commissioner of Federal Fisheries, recommending the Pennsylvania Fish Commission be given the power to stock and regulate all Federal waters in Pennsylvania. Motion carried.

C. R. BULLER, Chief Fish Culturist

Mr. Buller discussed the reason why some trout in project streams were under the size limit and stated it was a conservative measure. Some of the trout hooked would probably die if fishermen would not release them properly; 20,000 streams are stocked in this State. "If the Fish Committees in the various counties will work out a satisfactory program for stocking the streams, the commission would be glad to cooperate", stated Mr. Buller. With reference to fingerling trout, the Commission regards them as a surplus and these would be available for stocking after all ponds have been filled.

W. C. RYDER, Game Technician, Division "G"

Mr. Ryder distributed samples of Pennsylvania Game Commission Food Plot Mix to the delegates and stressed the need for proper food cover for a plentiful supply of game. He presented antlers of deer showing how the food and proper sex ratio will produce greater and better spread of antlers. Pamphlets on bird homes and feeding stations, Pennsylvania Game Food Plot Mix and Game Shelters by planting shrubs and trees were distributed to the men.

ROBERT LAMBERTON, Member Game Commission

Mr. Lamberton spoke on Conservation and complimented Mr. Leffler upon his efforts in behalf of the sportsmen of the State. He stated the Northwest Division were in favor of the Fox Bounty.

Potatoes, trout and the fryin' pan — can you beat this combination for a dinner fit for a king?

SAMUEL C. CASTNER, Member Game Commission

Mr. Castner was a former director in the Federation of Sportsmen's Clubs and was elevated to the Game Commission. He stated the State Federation makes the Game Commission of Pennsylvania. We should be careful who is elected to be directors and especially the President of the Federation. There is plenty of fun in cutting trees for deer browse, as experiments have been carried on in Game Refuge No. 68 very successfully. Should you be near Loyalsock Game Farm pay it a visit.

SETH GORDON, Executive Director, Game Commission

Mr. Gordon stated the saturation point had been reached in Farm Game Projects but that Special Wildlife Refuges, sponsored by reputable Sportsmen's Clubs was the next step in real conservation. There are 1671 townships and if one refuge was located in each what a difference that would make. However, over 1200 are now found in the State. The increase in land purchase and its management in the past four years is 60 per cent. Over 30,000 rabbits were trapped and released this past winter. He stated that 47,000 bucks and 14,000 antelless deer were killed in 1939.

ROLLIN HEFFELFINGER, Field Supervisor Division "G".

Mr. Heffelfinger stated we should go back and sell rabbit trapping in the local areas, as they are the best stock yet. Over 5,000 rabbits had been trapped in this Division and the surface was merely scratched, so to speak. He distributed literature on Primary Game Refuges, Auxiliary Game Refuges, State Game Lands by Counties and Cooperative Farm-Game Projects. He thanked the men for their fine cooperation in all phases of game activities.

V. M. BEARER, District Forester

Mr. Bearer very graciously extended the cooperation of his department in offering to have food plots planted for game and the cutting of certain trees for browse. He asked the cooperation of the clubs to assist the Forest Fire wardens in reporting and assisting in forest fires.

McKEAN ADDRESSES FRAZER CLUB RALLY

Frazer Township Sportsmen's Club's fifth annual banquet in Tarentum Legion Home, was by far the most enjoyable of the annual functions conducted by the energetic group of sportsmen from the Pitcairn Heights area.

In addition to a fine program of talks and entertainment, the club distributed 70 prizes among the 150 guests, a ratio of a prize to every other person in attendance.

Speakers at the dinner included well known game and fishing officials, as well as promenent sportsmen.

The feature address was made by Dr. M. W. Heilman, who gave a highly interesting talk on big game throughout the Rocky Mountain area, from Alaska to Mexico.

The other speakers included Fred McKean, of New Kensington, member of the Fish Commission; Ralph Liphart, county game protector; Sam Henderson, fishing protector of Allegheny and Westmoreland Counties; John Mock, outdoors editor of The Pittsburgh Press; W. C. Ryder, state game technician, and Bob Yake, secretary of the Southwestern Division of Sportsmen's Clubs.

George N. Scheid, of The Valley Daily News, acted as toastmaster of the affair.

Otto DeQuinze, president of the Frazer club, led the committee which arranged the banquet.

Pete Krass, of Carnegie, sportsmen's club organizer, showed several interesting reels of movies on conservation projects.

Splendid musical entertainment was provided by Mrs. G. Webber Knight, whose accordion solos appeared twice on the program.

Allentown Call Photo

Mrs. Herman Buss and son Larry of Catasauqua trying their luck for trout early this season in Jordan Creek at Helfrich's Spring, Lehigh County.

LEFFLER AND BULLER AT HUNTINGDON

The Huntingdon County Game, Fish and Forestry Association joined the nation in observing Wildlife Restoration Week and held its fifth annual banquet in the social rooms of the First Methodist church. Over two hundred persons were present at the affair.

Ross L. Leffler, of McKeesport, president of the Pennsylvania Game Commission, and C. R. Buller, of Bellefonte, chief fish culturist, Board of Fish Commissioners, were the main speakers for the occasion.

The program opened with the singing of America, after which Rev. C. W. Fields said the invocation. A trio, "The Chirps", of Juniata College, sang several numbers during the evening.

Harold Fisher, president of the Huntingdon County Game, Fish and Forestry Association, presented the toastmaster, Dr. Fred R. Hutchison, who in turn presented Mr. Leffler. The speaker has been a member of the State Game Commission for 15 years. For 23 years he has been associated with Boy Scout work and is now regional director for five states.

Pennsylvania now leads all other states in the union in conservation work, Mr. Leffler stated in opening his address. The Commonwealth has made great strides in the past two decades and the work continues. Conservation is vital to all.

Defining a sportsman as a man who plays the game according to the rules of the game he plays, Mr. Leffler directed his remarks to those who are not sportsman according to his definition. It cost $400,000 a year to check on those who do not know how to play the game of hunting according to the rules.

At the close of the last century Pennsylvania was a "brush state" due to wanton destruction of the woods. With the forest went the game and in some instances the species of wildlife were exterminated. The passenger pigeon, the panther, the timber wolf, the native beaver, native elk and native buffalo all disappeared from Penn's woods.

Today hunting is a sport and not a matter of killing for meat. The sportsman must conserve and protect for himself and for future generations.

Major Lynn G. Adams, head of the State Motor Police, recently stated that not one habitual criminal in Pennsylvania penal institutions admitted an interest in outdoor life. The youth of the nation deserves the wholesome influence of outdoor life and a right to hunt and enjoy the sport. Conservation is the only answer.

The speaker pointed out that the Game Commission's annual income is $1,250,000, while it is estimated that Pennsylvania hunters spend $30,000,000 each season for hunting and fishing.

In closing, Mr. Leffler urged his hearers to back the Boy Scouts to build good character in the youth of the nation, be good sportsmen and good citizens of the U. S. A.

C. R. Buller was then introduced. He asserted that careless and indiscriminate planting of fish is doing more harm than stream pollution today. He went on to prove his statement by showing that where fishermen destroyed the cycle of life provided by nature no good resulted. He gave a number of examples to prove his point.

In Cuba black bass were imported. They prospered and ate the top feeding minnows that lived on the foam causing malaria. As a result Cuba has had its worst epidemic of malaria in years, all due to the stocking of the black bass.

Indiscriminate planting of fish is a headache even if it does seem wise to many fishermen. Ignorance of the fact that interference with nature's cycle of life causes disastrous results must be wiped out, Mr. Buller stated.

Some present day stocking programs are wrong and will work hardships on fishermen in the future, so that while the grandfathers are blamed in many cases, a great deal of the trouble may be readily traced to the present generation.

Both Mr. Leffler and Mr. Buller were presented gifts by the toastmaster on behalf of the Association and as a remembrance of their visit to Huntingdon.

The toastmaster presented a number of guests: William G. Fluke, of Saxton, a member of the State Game Commission; W. J. Davis, division supervisor, State Game Commission; John Sedam, game technician; T. Roy Morton, of Petersburg, district forester; Thomas Bell, county game protector; Gerald Swayne, president of the junior sportsmen's group; Charles Cisney, superintendent of game bird rearing unit; Ross Erb, chestnut project; Maurice L. Banker, chairman, south central division, Pennsylvania Federation of Sportsmen's Clubs; George Black, of Rockhill Furnace, president of Huntingdon County Federation of Sportsmen's Clubs; Merrill Merritts, of Altoona, vice-president of Pennsylvania Federation of Sportsmen's Clubs.

The Association officers were also introduced: James Kyper, vice-president; Herbert Jackson, secretary; Howard Shilling, treasurer and Ed Miller, Clyde Davis, Fred Mark, Harry Davis, Harold Corbin, F. M. Simpson, directors.

A one-reel moving picture, "Once Upon A Time", was shown and everyone present enjoyed it. The closing number on the program was the singing of "Auld Lang Syne", by the assembly.

BROWNS, BRUNETTES AND BROOKIES

(Continued from Page 9)

The gravely courteous mountain boy said: "Go first!" Not so, this gallant. Be polite until it hurts; that's my motto.

"Go right ahead, Sir Galahad, I'll follow. There aren't any fish in this blamed trickle anyway", opined I.

"You won't get any", sez he, "at least not after I pass that-a-way".

"Neither will you", scoffed I, "get started".

Well he did, and how. Out of about a pitcher full of water he yanked a nine or ten inch brookie. A couple yards farther on, a little swirl about deep enough to hold a ten quart bucketful yielded up another. Just around the first bend, another—things were looking up; that baby lived in a depression perhaps big enough to swallow the usual apartment size bathtub. Despite the leader, your narrator then overpowered one out of the same hole.

By this time I was perhaps willing to change places with my pal—had pride permitted and he offered. But he didn't offer; the spirit of the chase had clasped the lad to her bosom and how that guy did go. With nerves aquiver like a thoroughbred at the post, he raced to the culvert and fed line into a pool some fifteen feet long, two or three feet across, eighteen to twenty inches deep, with a clay washout under the bank, protected and shaded by a wild grape vine. By the time I arrived a few seconds later, three fine brookies lay gasping on the sand.

And on and on down past the barnyard, down into the whispering hemlocks, down through the wooded bottom and blackberry thickets where trout were trout; *and God put them there for mountain boys.* Bigger and better as we went; he added four, your correspondent two.

Again never judge a book by its cover; nor a trout stream by its trickle. And when a mountain boy tells you not to use a leader, better take his advice. Never, never refuse to go first when he offers you the privilege. It's a mistaken courtesy, Old Top, a mistaken courtesy!

SPEAKS ON BASS AT UNION MEETING

C. A. Kniss, well known Mifflinburg sportsman, gave a splendid talk on bass fishing in Union County at a meeting of the Union County Sportsmen's Association held in the P. O. S. of A. Hall, New Columbia. Mr. Kniss described the habits of the bass and with that pointed out effective ways of taking bass with live bait and casting with plugs, stressed the advantages, extra thrills of taking this "bronze battler" with the dry fly and fly fishing tackle. He described in detail the technique of dry fly fishing for bass. He also displayed, for the benefit of sport, eight dry fly lures used exclusively in his fishing. He closed his remarks with a plea to the fisherman to save the undersized bass by careful releasing.

Mr. Kniss also pointed out how the bass fisherman can improve his sport by refraining from killing every legal size bass caught, calling the fisherman's attention to the slogan, "If you would catch more fish, kill less."

The program included three reels of motion pictures shown by R. L. Stahl of Mifflinburg which were greatly enjoyed.

Cash prizes were awarded to Marie Kerstetter, Evelyn Laney and Junior Musser, all pupils of the Mifflinburg schools, who were selected winners of the poster contest conducted by the association. The posters conveyed ideas against illegal fishing and hunting.

Harold Leiser of Lewisburg displayed a number of sample feeders, much to the interest of those present.

It was reported that Union County sportsmen had personally subscribed $363 to the "Restore the River Fund." The necessary $23,000 has been raised. The project has been assured and will be started before the end of the fiscal year.

A. J. Herbster of Laurelton, Roy L. Stahl of Mifflinburg and Richard Diehl of Lewisburg were named a committee to make arrangements for a sportsmen's picnic.

VENANGO CLUB HEARS REPORTS

Thirty-seven members attended the monthly meeting of the Venango County Rod and Gun club held in the K. of C. club rooms, with H. S. Gahagen presiding.

An encouraging report on trout conditions in the county was given by J. H. Ahrens of Oil City, the local fish warden.

William Campbell, the county game warden, reported that several hundred rabbits have been trapped on posted ground and moved to territory where hunting is permitted.

Following the business session, S. W. Jackson, gave an interesting talk on Pennsylvania wild life, concluding with a very concise and detailed explanation and diagnosis of our black bear and his various relatives.

"A Scotchman gave a penny to a blind man. He needed the pencil."

Fishing streamer fly with the fly rod, Gerald Tiffany of Freeland scored this catch of smallmouth bass, yellow perch and rock bass last season in the North Branch of the Susquehanna River. Photo by Truman Benson.

MIDDLE ATLANTIC CASTING CLUB NOTES

(Continued from Page 11)

Tournament on June 9th at Willow Grove Park and placed in the Plug Casting for Accuracy event. Ray tells us that there are plenty of fish in his local territory on which to practice with any kind of fresh water lure, and that between now and the 1941 Tournament he will have an opportunity to practice while fishing.

Dover Fishing Club of Philadelphia

Regular monthly meetings have been discontinued for July and August. Outdoor activities, however, are in full swing and three club trips to nearby fishing centers have already been enjoyed. Several others are planned for this month and August.

Dr. Hankinson, chairman of the trip committee, spent a week with several other members fishing for channel bass on the Eastern Shore. This is an annual event and those going on the trip *always get their bass.*

Willard Bowman and a party returned from a trip to Oregon Inlet and report the taking of five channel bass weighing up to forty-four pounds.

The Overbrook Lions Club were our guests at the last meeting and as they witnessed the picture, "Battling Giant Tuna", the lions roared with delight every time a horse-mackerel would strike. At the conclusion of the meeting the club served them a real fisherman's lunch and they all went home wagging their heads with friendliness.

Surf Caster Ralph Bowman who for the past two years has held the Eastern Distance Record, broke that record by more than eight feet at the M. A. A. C. C. Tournament at Willow Grove Park on June 9th. His new record is 578 ft. 10 inches. Ralph was also awarded the President's Cup for scoring the highest number of points made by any individual caster in the tournament.

The casting team is out practicing every Wednesday night to get in shape for the Ocean City Cup Tournament on August 10th. After winning this event four out of the past five years the boys are pretty confident of adding another victory to their now enviable record.

Members who have not entered their catches in the Prize Fish Contest for 1940 should not neglect this opportunity to cash in on some handsome awards. The competition so far this year is very keen but if you want to keep it sharp fill out an entry card for every eligible fish caught. The entry should be made within seven days after the fish is caught and the catch must be made within three hundred miles of Philadelphia. Send all entries to the Secretary, Mr. Robert Morris, 2728 W. Montgomery Ave., Philadelphia, Pa.

Gloucester County Game and Fish Association

Carl Leisy of Mantau, New Jersey, a member of the Gloucester County Game and Fish Association, tied with William Dur of Holmesburg Fish & Game Protective Association and, with George DeGorgue of the Pennsylvania State Fish & Game Protective Association for second place in the Plug Casting For Accuracy event. Lorin Ott and 9-year-old Donald Ott, sons of Lorin, both of Mantau, New Jersey and members of the Gloucester County Game & Fish Association, also placed among the highest four in the Plug Casting for Accuracy event. This is the third successive year in which father and sons have competed in the M. A. A. C. C. Tournament and have turned in excellent scores.

The Gloucester County Game & Fish Association meets each month (excepting July and August) at the Franklin Hotel in Glassboro, New Jersey. Edward Klaisz is President of this Association.

Among its activities this Association held a Field Trial for Bird Dogs last spring and plans to hold a Field Trial for Coon Dogs in October. During the past spring, too, this Association planted approximately 100 permanent feed patches throughout the hunting territory of Gloucester County, New Jersey.

Holmesburg Fish and Game Protective Association

In the Plug Casting for Accuracy event at the M. A. A. C. C. Tournament on June 9th, Art Clark of Fox Chase Manor, a member of the Holmesburg Fish and Game Protective Association, took second place in Class "A"; while in the Fly Casting for Distance event, Frank Krebs, also of this club, placed second in Class "A". Art Clark also placed third in Class "A" in the Fly Casting for Accuracy event while William Dur of Bristol took first place in Class "B" of the Fly Casting for Distance event and Walter Wilson and Roger Fisher, both of Philadelphia, also won merchandise prizes in the Plug Accuracy and Surf Average events.

Edward Behner, of Philadelphia, is President of this club and Russell Krantzler, also of Philadelphia, is Secretary. During July and August, meetings of this Association are generally held at the Holmesburg Club House on the second Monday of the month.

Allentown Call Photo

Finis to a stirring scrap as Leon Kellow of Allentown slips his landing net under a trout in the Little Lehigh on opening day.

During the remainder of the year, meetings are held on the second Monday of the month in the Library, Franklin Avenue and Hartell Street, Philadelphia.

Landsdale Sportsmen's Club

William Stoneback of Colmar, President of the Lansdale Sportsmen's Club and President also of the Montgomery County Federation of Sportsmen's Clubs, has been busy indeed during the past few months. In addition to his own local Club's activities, he has, with the aid of other members of the Federation, put across the First Annual Picnic of the Federation, which was held at the new Montgomery County Park, Green Lane, on June 22nd. This affair was well attended, and the cooperation of members of member clubs of the Federation made of it a highly successful event. The new Montgomery County Park offered very comfortable arrangements for this picnic, with tables, benches, fine old shade trees, adequate space for games and other amusements, as well as casting facilities on the water above the newly constructed dam on Deep Creek. Among the attractions scheduled by President Stoneback and his aides for the Federation picnic were games and various contests for men, women and children, including Plug Casting for Accuracy events and quoits. Prizes were awarded on a Class System basis in the Plug Casting for Accuracy contest.

Ritner W. Tomlinson of North Wales is Secretary of the Lansdale Sportsmen's Club, which holds its meetings on the fourth Tuesday of each month in the American Legion Hall in Lansdale.

Lower Merion Rod and Gun Club

Ernest Jenkins of Narberth, Chairman of the Fresh Water Activities Committee of this club, won first place in the Plug Casting for Accuracy event at the Third Annual Tournament of the M. A. A. C. C., at Willow Grove Park on June 9th. Against a field of fifty entrants in this event, Ernie's score was highest and helped his Club to capture the Horrocks-Ibbotson Cup, which was awarded this year to the club whose members totalled the highest number of points based on the first three scores in all three classes in the Plug Casting for Accuracy event only.

The following additional casters from the Lower Merion Rod and Gun Club (listed alphabetically and not according to scores) placed and also won merchandise prizes (principally fishing equipment) in various of the events at the Tournament: Edward Anderson of Narberth, Howell I. Dietrich, formerly of Philadelphia, Elmer Jenkins of Narberth, Charles Lucas of Cynwyd, Charles Spencer, Sr., and Charles Spencer, Jr., of Upper Darby.

The bait, fly and surf casters of the Lower Merion Rod and Gun Club have had a busy season. The weather man did not look down with favor upon them during the weeks preceding the several casting tournaments in which they participated. Between showers, however, they were able to snatch a few moments of practice for these tournaments, which included in addition to the M. A. A. C. C. Tournament, an intra-club tournament at the Annual Spring Picnic and Outing of the Lower Merion Rod and Gun Club, held June 15th on Ridway Farm, Bethayres, Pa., and a plug casting tournament sponsored by the Montgomery County Federation of Sportsmen's Clubs at its First Annual Picnic

ıeld on June 22nd at the new Montgomery County Park, Green Lane, Pa.

With above-mentioned tournaments now events of the past, the Lower Merion Rod ınd Gun Club members will devote their veek ends for the remainder of the summer o rod and REAL fishing instead of rod and eel casting. And at the end of the 1940 fishng season, the Fresh and Salt Water comnittees of this Club will award prizes to lub members who catch the largest fish of welve different fresh and salt water species.

George A. Purring of Narberth is President ınd Ellen A. Dietrich, now of Upper Darby, s Secretary of this Club.

Winners of events held at the L. M. R. and G. Club Annual Spring Picnic at Bethayres, June 15th:

Plug Casting for Accuracy — Ernest and Elmer Jenkins of Narberth (tied).

Plug Casting for Distance—Ernest Jenkins.

Surf Average—Walter P. Miesen, of Narberth, former President of this Club.

Surf Distance—Walter P. Miesen.

Quoits—Edward Merkle and Jas. Rennix, oth of Narberth.

Pistol—Sherman Williams of Roxborough, Philadelphia.

Rifle — Walter Johnston of Roxborough, Philadelphia.

Water Boiling Contest—Charles Jenkins of Narberth.

Trap Shooting—Bill Ridgway, of Bathayres; John Albrecht, of Narberth; Dave Mawhanny, of Narberth; Edward Mergle, of Narberth; Walter P. Miesen, of Narberth; Bill Shaw, of Ardmore, and Charles Latch, of Narberth who tied for first place three times.

Monocacy Field and Stream Association

A newcomer this year to the Middle Atlantic Association of Casting Clubs is the Monocacy Field and Stream Association, which was ably represented by William Sheridan, who placed first in Class "B" in the Plug Casting for Distance event on Sunday, June 9th, at Willow Grove Park.

Lawrence L. Lehr of Bethlehem, Pa., Secretary of this Association, writes that this organization's address is Mauch Chunk Road and Bethlehem Avenue, Bethlehem, Pa.

Montgomery County Fish and Game Protective Association

Hon. Geo. C. Corson, of Wyncote, is President of the Montgomery County Fish and Game Protective Association. Eugene Miller, of Norristown, is Secretary. This Association meets on the third Friday of March, June, October and December in the office of the DeKalb Nurseries, DeKalb Street Pike near the Germantown Pike, Norristown.

Charles Hughes and George Sinclair, of Norristown, both members of this Association, were also members of the Montgomery County Federation of Sportsmen's Clubs Picnic Committee, which successfully worked out plans for the First Annual Picnic of the Federation, held on June 22nd in the Montgomery County Park at Green Lane, Pa.

Pennsylvania Fish and Game Protective Association

The annual picnic was held at Valley Creek amid a beautiful setting just west of Valley Forge. This picnic which is an annual affair is known as the "Trout Outing" and according to a statement made by President Nicholson, who is now serving his twentieth consecutive term, was the most successful outing ever held by the association.

Over four hundred members attended and participated in the various sports, principle among which were fly and plug casting managed by the Secretary John Michel, who is also President of the Middle Atlantic Association of Casting Clubs.

All the "eats" were provided by the Vice-President Bill Burke, who loaded down the long tables with rare delicacies. One feature of this very important part of the outing consisted of 30 odd hot baked hams.

Secretary Michel announced that the President is not well and would like the members as well as his many friends to send him a card to encourage a quick recovery.

Perkiomen Valley Sportsmen's Association

At the M. A. A. C. C. Tournament on June 9th, Harold Allenback, of the Perkiomen Valley Sportsmen's Association, placed in the Plug Casting for Accuracy event and in the Plug Casting for Distance event as well.

Howard Shallcross of Graterford, the first President of the Montgomery County Federation of Sportsmen's Clubs and one of the active workers of the Federation, is President of the Perkiomen Valley Sportsmen's Association. John C. Markley of Schwenksville is Secretary of this Association. This club holds its meetings on the second Thursday of each month in the Borough Hall at Schwenksville.

Royersford Hunting and Fishing Association

Irwin R. Clemens of Royersford is President, and Donald Maier, also of Royersford, is Secretary of the Royersford Hunting and Fishing Association, which holds its regular monthly meetings on the second Thursday of each month in the Friendship Fire House, Green Street, Royersford.

Allentown Call Photo

Solid comfort on a basket as Robert Shaeffer of Allentown opens the season for trout at the Iron Bridge on the Little Lehigh.

Irwin Clemens, who is also a former President of the Montgomery County Federation of Sportsmen's Clubs, and Marie Flemming of Royersford, both aided greatly on the Picnic Committee of the Federation, as it planned and carried out its plans for the First Annual Picnic of the Federation.

Upper Providence Fish, Game and Forestry Association

R. H. McFarland of Oaks, President of the Upper Providence Fish, Game and Forestry Association, won a handsome reel as first prize in Class "B" of the Fly Casting for Accuracy event at the M. A. A. C. C. Tournament on June 9th. G. H. Smith and George F. Bishop, both of Oaks, Pa., won merchandise prizes in the Plug Casting for Accuracy event; while George Bishop also won a similar prize in the Plug Casting for Distance event.

Joseph Dietrick of Oaks is Secretary of this Association, which holds its meetings on the third Thursday of the month. During the summer months, the outdoor meetings of this club, which are held on the Association's club grounds, are generally followed by a "doggie roast" or "corn roast" and are well attended.

Between fishing jaunts, "Mo-Skeeto" shooting keeps many of the club members busy at Oaks.

Wissahickon Field and Stream Association

This Club is also a newcomer this year to the M. A. A. C. C. Already, however, one of its members, Ralph Slutte of Ambler, has made a mark for himself by tying for first place in Class "A" of the Fly Casting for Accuracy event and by taking second place in Class "B" of the Fly Casting for Distance event at Willow Grove Park on Sunday, June 9th.

George J. Deems of Ambler is President, and Daniel E. Biddle, also of Ambler, is Secretary of the Wissahickon Field and Stream Association.

Members of this Association not only fish well, but hunt well. When they fish they catch fish, and when they hunt they kill game. We just learned that last season the President of this club got his first buck, an 8-pointer, which he killed in Sullivan County; while three other members of his hunting party also "bagged" bucks on that trip. They are Andrew Lichier of Penlyn, Pa., who brought down an 8-pointer; Jack Dempsey of Ambler who killed a 10-pointer, and Albert Colfish, also of Ambler, who killed a 6-pointer. Andrew Lichier has killed four deer so far, and is Chairman of the "Buck Club", an honorary branch of the Wissahickon Field and Stream Association. To gain membership in the "Buck Club", a member of the Wissahickon Field and Stream Association must prove that he has MISSED A BUCK. Upon presenting such proof to the Club members, the aspiring new member then submits to having his shirt tail cut off amidst appropriate "ceremonial rites", as he is taken into full membership in the "Buck Club".

Chinese Patient (on telephone): "Doctor, what time you fixee teeth for me?"

Dentist: "Two-thirty, all right?"

Chinese Patient: "Yes, tooth hurty, all right, but what time you fixee?"

IT CAN HAPPEN HERE

By DON MILLER

"YOU know it's almost unbelievable," said Bob, leaning back in the big easy chair and lighting his pipe—"that such a thing could take place in peaceful old, civilized Pennsylvania"—"now if it were somewhere in the Sierras or the Rockies"—"Well, it did", I answered, "and only one hundred and fifty miles from home, too."

The reason behind this strange conversation was a bit of harrowing experience that both of us had gone through not five hours before, and strange as it may seem it took place at Spring Creek, known as the "Fisherman's Paradise", and situated in the Allegheny Mountains of Pennsylvania, and only a few hours drive from well-populated districts.

It was about the middle of May, in the midst of the trout season that we had driven up from Philadelphia to try our luck at the state's most popular trout fishing spot.

However, due to reasons which we were unable to diagnose at the time—we had not met with much success. Probably because we were too anxious—and like lots of other fishermen who visit the Project for the first time, we did not realize that it was just as necessary here as in other streams to put forth the best skill and judgment to catch trout, even though we knew that there were plenty of them in there. Unfortunately—at the time we had thought it only necessary to drop any old kind of fly in the water and the trout would be waiting to gobble it right up, but we found to our sorrow that they just weren't built that way.

So, after spending all of one day at the Project we decided—since we only had one more day to spend there—that it would be wiser to sacrifice our pride and go downstream—where there were no restrictions—and use live bait. Accordingly, the next day downstream we went and little did we think of what the fates had in store for us.

The road leading downstream winds along with a steep cliff on one side, and the creek on the other—constructed of hard clay, and only wide enough for one car, with now and then a clearing to enable two cars to pass. As I recall it now—we hardly noticed these features—feeling so secure in our nearness to civilization—and the possibility of danger seemed very remote.

It's an easy stream to fish.

With our live bait we had no trouble at all in snaring several good sized trout and were congratulating ourselves on our wise move when we noticed that a storm was brewing. Naturally, we were not alarmed for as with everyone else we had met with many of these storms while out on the streams.

We had just about finished packing our equipment, and were starting the drive back, when the storm broke. Well, we had seen plenty of these storms, and this one seemed no different from the others so we were riding rather unconcerned along when suddenly we heard a distant rumbling, sort of like thunder, only it seemed to be growing nearer.

Peering through the pelting rain I soon saw what was causing it—about fifty feet in front of us the whole side of the cliff seemed to be tumbling down into the roadbed. Large boulders heavy enough to severely damage the car if not completely disable it—accompanied by a dearth of smaller stones, mud and small trees were tumbling down the mountainside in a continuous torrent. We could see that it was impassable and with the creek rising rapidly we had only one recourse, to go back without delay.

Being unable to turn around I put the car in reverse and started back. We had gone about a hundred yards or so when we heard another rumbling, similar to the first. We knew what it was this time without any doubt and with the knowledge came the realization—we were trapped.

Hardly daring to look we stopped the car and looked back. About fifty feet to our rear was another landslide—an exact replica of the other. Up to this time the cliff wall between the two had remained unbroken—but we knew that it was just a matter of minutes until the whole side of the cliff might become loosened and come tumbling down about us.

Endeavoring to remain calm, we debated whether it would be wiser to leave the car and 'dig for it" up the side of the cliff as in some places it was accessible. While we were thus debating—the rain—suddenly as it began—stopped. We both gave a deep sigh of relief realizing that the worst part was over—and tackled the next problem—how to get out.

The pile of debris in front of the car was about four feet deep and ten feet wide—and we could see that it would be quite a job to get over it. However, we decided to risk it and although the car was at about a forty-five degree angle as we pulled slowly over the barricade—we made it and were soon speeding merrily on our way—with a full creel, and a story for the boys back home.

Sally (on phone): "Oh, Betty, you must come over and see the gorgeous engagement ring Al gave me."

Betty. "Don't be silly. I wore it all last year."

CHILDREN'S FISHING PROJECT OPENED

Perch, sunfish and bullheads are available in large numbers for supervised fishing for the children at Mountain Lake, near Scranton. The pond has been amply stocked, H. M. Keber, superintendent of parks declared.

The season will continue until Labor Day. Boys and girls between the ages of 5 and 15 years are eligible.

The same regulations in effect the past four years will prevail this, the fifth season. Buttons which will be the required licenses will be issued. Eighteen hundred buttons were distributed last year.

The catch per boy and girl will be limited to two per day of legal length. Only barbless hooks will be allowed, in order that those too small for the frying pan can be returned to the water without being destroyed.

Fishing from shore will be permitted. Boats are prohibited. The hours will be from 9 o'clock daily except Sunday.

Fred J. Bonnert, caretaker at Robinson Park, and two assistants to be furnished by the recreational division of the WPA will be in charge.

The purpose of supervised fishing is to "teach geod sportsmanship, the art of fishing and to keep the children off the streets," Kerber declared.

HUMES ACTIVE IN ALLEGHENY CLUBS

One of the best known men in Western Pennsylvania firemen's and sportsmen's affairs, Jesse L. Humes of 1301 Freeport Road, Natrona Heights, celebrated his 42nd birthday recently.

"Jess," as he is familiarly known to the thousands of volunteer firemen and sportsmen in the Western Pennsylvania district, has devoted more time to affairs of these two groups probably than any other one man. A member of Highland Hose Company for more than 20 years, he served as its president for nine years. He was first president of Tarentum Fire Department and served as president of the Western Pennsylvania Firemen's Association in 1935-36.

President of Tarentum Sportsmen's Club for three years, he also served as secretary of the club for five years. He is a past president of Allegheny County Sportsmen's League and for seven years was secretary of the county organization. He also served as a member of the legislative committee of the county organization for a number of years.

TROUT OF MICHIGAN

One of the most fascinating treatises on trout and their history that has come to our attention is "Trout of Michigan" by Harold Hinsdill Smedley of Muskegon, Michigan. The author delves into nicknames for trout, events leading up to the passing of the Michigan grayling, often termed the most beautiful fish in the world, the brook trout, rainbow trout, brown trout, and also discusses flies.

Unusual sidelights to trout fishing are always hightly interesting and Mr. Smedley does himself proud in this 49 page treatise.

Scoring on largemouth bass with the plug.

"DOG DAY PLUGGING"

(Continued from Page 7)

are taken to prevent this. When water temperatures are unusually high, bass placed in a live net or on a stringer along the shoreline or subjected to the same procedure in a boat, die quickly. Carried in creel, after having in all probability been killed after capture, and subjected to temperatures that may hover near the hundred mark, they become rancid in a short time. Apart from the danger in eating spoiled or slightly spoiled fish, the waste of game fish upon which a sporting value of "five dollars a pound" has been justly placed constitutes an almost unpardonable offense against conservation.

It is to be recalled, in caring for your catch, that the gills are among the first organs to go bad. Hence it is a sensible policy to string your fish, remove the gills and eyes and wrap in moistened thick paper before placing in the creel. Wax paper is also good. There are those who contend that after fish have been properly cleaned for carrying, the dryer they are kept the better. Of vital importance, however, is removal of those parts that are most apt to go bad in a hurry. There is one angle to cleaning fish at the time of taking that raises a hurdle, and that is, when a possible record bass or wall-eye is caught. Naturally, the fisherman, if he is planning to enter it in a fishing contest, wants the live weight recorded to make it eligible. An inexpensive pocket scale solves that one, and should a camera be available, the entire procedure may be carried through to the satisfaction of all concerned.

Generally speaking, August fishing is far from tops, but to the ardent bass fisherman, passing up a month because it may not offer the best in possibilities is an unheard-of procedure. Certainly the handicaps imposed by natural environmental conditions swing the balance sharply in favor of our quarry, be it smallmouth, largemouth, wall-eye or pickerel. But, believe it or not, there is a growing fraternity of sports fishermen who purposely handicap themselves, like doing it and may kill only three or four outstanding fish a season. For them, the sport is the thing, and we have noted in recent years a steady trend in this direction, one of the most encouraging signs for improved fishing in our intensively fished waters. The artificial lure, fished on either casting rod or fly rod, fits perfectly into this sport fishing picture. Bass caught are usually hooked in the mandibles or jaws and may be released with a minimum of injury.

Yes, "Dog Day" fishing is tough but the tougher it is the more satisfaction may be had when you score a catch. Go to it!

WILL RAISE FISH

The Conewago Rod and Gun Club has begun construction of a fish-rearing dam on the Snipe Creek off the Maytown road, at the Roland farm, three miles from Elizabethtown, Lancaster County. Fifteen members of the club have been on the job, and other members are asked to volunteer for this work. Anybody wishing to help should ask George Doyle for information, club officials said. This dam, when completed, will be 140 yards long, 30 yards wide, and five feet deep at the breast. It will be constructed of railroad ties, and it is planned to make the spillway of concrete.

The purpose of the dam is the raising of largemouth bass and bluegill sunfish for restocking in the Conewago Creek, near Elizabethtown.

Since its organization as a club last March, the Conewago Rod and Gun Club has been very active. Fish and game have been secured from the State; the public relations committee has done excellent work; the conservation committee has been on the job, and 240 members have been brought into the organization.

All sportsmen from Elizabethtown and surrounding communities are urged to join the club. The dues of one dollar will entitle one to a paid-up membership to September 1, 1941 (fourteen months for one dollar).

MONTGOMERY CLUBS AT ANNUAL BANQUET

A record crowd of more than 400 men and women were in attendance at the annual banquet of the Montgomery County Federation of Sportsmen's Clubs, which was held in the William Penn Inn, Sumneytown and DeKalb Pikes.

William Stoneback of Colmar, newly-elected President of the Federation, was the host and the following former presidents of this organization were present: Howard Shallcross of Norristown, John A. Miller of Narberth, and Irwin Clemens of Royersford; as well as former Acting Secretary J. Warren Ziegler of Norristown, former First Vice-President Victor Nyce of Souderton, and Ira J. Mills of Graterford, Supervisor of Bantam and Game Bird Propagation. Also in attendance were various State and County officials, including the Montgomery County Park Commissioners who have ben responsible for the completion of the beautiful new Sportsmen's Park at Green Lane.

Members of the following affiliated clubs of the Federation arose at the club roll call: Boulder Valley Sportsmen's Association, Douglass Rod and Gun Association, Huntingdon Valley Fish and Game Protective Association, Lansdale Sportsmen's Club, Lower Merion Rod and Gun Club, Montgomery County Fish, Game and Forestry Association, Perkiomen Valley Sportsmen's Association, Pottstown Sportsmen's Club, Royersford Hunting and Fishing Association, Souderton Game, Fish and Forestry Association, Upper Perkiomen Fish, Game and Forestry Association, Upper Providence Fish, Game and Forestry Association and Wissahickon Field and Stream Association.

The guest speaker Calvin Althouse (former principal of Central High School) provided a delightful combination of witticism, satire and earnest reality in his remarks on the subject of "Sportsmanship". His audience followed him, convulsed though dubious, while he told them that "Marksmanship was first developed by an old farmer who cultivated an unusual skill in the art of hitting the coal bucket in a country store with his tobacco juice". In the more sober moments of his address, Mr. Althouse commended the efforts of the Federation and lauded its "gathering together of so many organizations" to promote the "enjoyment of today as well as of youth and tomorrow"—"to preserve natural life, to abate stream pollution", and to encourage activities out in the "fresh air and sunshine", where sportsmen "learn to take time out to live in the simplicity and cleanliness" that are the earmarks of sportsmanship as well as of Americanism.

Congratulations for the success of the banquet program, which included a "snappy" floor show and orchestral accompaniment, with dancing following the dinner are due the Chairman of the Banquet Committee, Forrest Henry, of Red Hill, as well as Howard C. Shallcross, George Sinclair, Charles Hughes and Merle Fleming, all of Norristown.

COOPERATION URGED AT INDIANA MEETING

A new record for attendance of a regular monthly meeting of the Indiana County Fish and Game Association was established at the county court house when over 400 of the near 600 members listened and saw movies during the two and a half hours stay in the court room.

The feature of last night's confab was the interesting movie-talk by Rolland Heffelfinger, Division Superintendent of the Pennsylvania Game Commission, on conservation. Mr. Heffelfinger pointed out the need of conservation and the help requested of true sportsmen in protecting the game and fish of the state inasmuch as only 154 men are paid to protect the game and fish sought by over one million hunters and fishermen annually. Color movies dealt largely with the four state game farms.

Previous to Mr. Heffelfinger's informative speech, President Andy Stahura introduced Dean Davis, Indiana and Cambria County Fish Warden, who asked local fishermen and fishermwomen to "treat the farmer white."

O. M. Pinkerton, local game protector, also gave a few short remarks in appreciation of the association's cooperation with him in his work.

TEST-TUBE BATTING FOR CATTERPILLAR

(Continued from Page 5)

material is too new to make positive statements, very good reports are coming in regarding it. As yet it is available only in the heavier weights. It resembles soaked gut in appearance, ties knots easily and appears to be very strong. We would appreciate letters from readers who have had experience with either or both of these new materials.

* E. I. Du Pont De Nemours and Company, Plastics Department, Arlington, New Jersey.

BANNER BANQUET IN WESTMORELAND

Termed one of the most successful banquets in the history of the group was the gathering in Greensburg recently of more than 375 sportsmen, mostly members of clubs affiliated with the Westmoreland County Sportsmen's Association.

There were 53 county clubs represented, in addition to several from Allegheny and Armstrong Counties.

Following early entertainment the group joined in singing America before the invocation was announced by Rev. R. Vincent Hartman, pastor of the First Reformed Church, of New Kensington, who asked that a minute of silence be observed while taps were played in memory of the late Welty M. Dom, one of the outstanding sportsmen and game conservationist of the county. Mr. Hartman also delivered the invocation in the absence of W. L. "Bert" Wright, retired division game supervisor, who was unable to attend due to illness.

William Achtzehn presided at the meeting and introduced the following sportsmen and called upon a number of them to speak: R. S. Cooper, vice-president, Southwestern Division; C. W. Ward, president, Pittsburgh Casting Club; J. W. Johnson, deputy game protector; Sam Henderson, Westmoreland County fish warden; W. E. Guckert, secretary, Allegheny County League; Dr. A. B. French, president of Wilkinsburg club; Jess W. Spiker, president of McKeesport club; Harris G. Breth, of Pittsburgh; Lloyd Steiner, fly specialist; John S. Shuler, traveling game protector; Sol McClure, Wilkinsburg club; William Matthews, refuge keeper; James Simmons, retired fish warden; Dr. Reitell, former member of fish commission; O. M. Deibler, former commissioner of fisheries; A. E. Bittner, Allegheny county; William Berlin, Westmoreland clerk of courts; John Dent, state senator; Dr. J. R. Madden, state representative; James Lovett, state representative; Dr. J. R. Madden, R. C. Yake, Harry Soles and I. G. Moyer, past presidents of Westmoreland County Sportsmen's Association; Ray McKissick, game protector of Armstrong county; Walter Miller, secretary, Armstrong County Sportsmen's Association; Bert Welch, refuge keeper of Armstrong county; James Banning, fish warden of Fayette county, and Mr. Barner, deputy game warden.

Ray McKissick, former game protector in Westmoreland county, who now holds a similar position in Armstrong county, was greeted by the sportsmen before the speakers of the evening were introduced. McKissick expressed his delight in being able to attend this function and tendered the invitation of Armstrong organizations to have Westmoreland clubs visit with them.

Fred McKean, member of the state fish commission, headed the list of speakers. He dwelt primarily on the passing of Welty M. Dom, the great friend and champion of Westmoreland's sportsmen. He told of the accomplishments, and the wonderful work he had done in helping to promote the Greenwalt dam.

W. L. Treager, county farm agent, followed McKean and after complimenting the group on the good fellowship in evidence, he made an appeal to them to "treat the farmer right" in order to gain greater hunting privileges.

Delivering the address of the evening was Rev. R. Vincent Hartman, who, after putting his listeners in a happy frame of mind with a number of jokes, branched off into several points of vital importance to the success of hunting and fishing.

He dwelt on the fact that one of the major problems confronting the sportsmen was in ridding the woods of so-called "game hogs."

His second point was that fishermen must band together with the Fish Commission in wiping out another hazard: "The careless and over-anxious fisherman" who causes "untold destruction."

NORTHEAST DIVISION FEDERATION MEETS

A meeting of the Northeast Division was called to order by Chairman John L. Neiger at 8:10 P. M. Roll call—Officers: Chairman, J. L. Neiger; Vice Chairman, W. Quick; Secretary, R. W. Steventon; Treasurer, F. S. Birchard. Counties—Carbon, I. J. Bleiler, delegate; R. W. Steventon, alternate; Lackawanna, J. L. Neiger, delegate; Luzerne, F. E. Haegele, delegate; Monroe, W. Quick, delegate; Pike, W. J. Schoonover, alternate; Susquehanna,, B. J. Kane, delegate; F. S. Birchard, alternate; Wayne, O. E. Hippensteel, delegate; N. C. Rarnham, alternate; Wyoming, J. W. Strohl, delegate.

The minutes of the last meeting were approved as read.

The Treasurer reported a balance of $79.01. A bill for the secretary's expenses since the last meeting amounting to $5.10 was ordered paid.

Some correspondence was read by Chairman Neiger.

There was a discussion of the prevailing conditions of the sportsmen's clubs of the division. It was noted that membership is decreasing.

It was moved by Mr. Bleiler and seconded by Mr. Haegele that the following resolution be adopted:

Resolved, That the Northeast Division of the Federation of Sportsmen's Clubs in meeting April 19, 1940 recommend that the President and Secretary of the Pennsylvania Federation of Sportsmen's Clubs convene the Board of Directors as soon as conveniently possible and complete the appointment of all committees called for under the by-laws.

Be it further resolved that the Directors formulate a definite program of action for the future of the organization and propose a modern and adequate set of by-laws, that will include a permanent committee to handle the sale of the Wildlife stamps from year to year and also include provisions for a permanent committee to cover organization activities for the future.

Be it further resolved that the by-laws be amended to include a permanent committee on credentials and provide instructions to the organizations including all the information to be requested from the delegate to qualify them properly at the state convention.

Be it further resolved that a more efficient method of keping all member organiaztions fully informed of what takes place at the state convention and Directors meetings be included in these new by-laws. Motion approved.

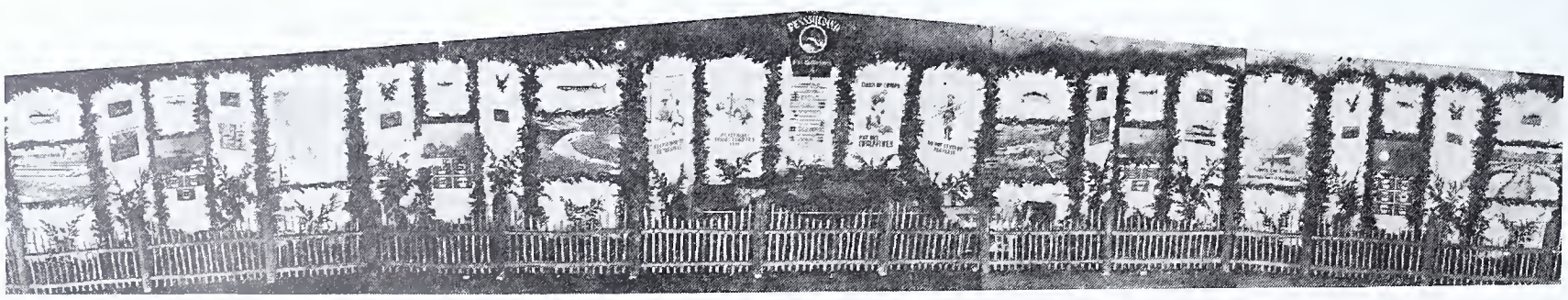
It was moved by Mr. Haegele and seconded by Mr. Bleiler that the secretary send a copy of this resolution to the President and Secretary of the Pennsylvania Federation of Sportsmen's Clubs. Motion approved.

It was moved by Dr. Hippensteel and seconded by Mr. Haegele that the secretary write to Rev. Samuel J. Truscott expressing the appreciation of the Northeast Division of his efforts on our behalf during the past years. Motion approved.

The following men were proposed and endorsed by the division for Fish Commissioner: John L. Neiger, Willard Quick, and James W. Strohl.

The secretary was instructed to convey these endorsements to Governor James, and the President and Secretary of the Pennsylvania Federation of Sportsmen's Clubs.

Prosperity, for most of us, is only being able to pay a little more for things we shouldn't buy anyway.



The Fish Commission's exhibit at the Philadelphia Sportsmen's and Motor Boat Show this year.

FAVORS INCREASE IN LICENSE FEE

Dear Mr. Editor

I have read with considerable interest the article by Gardner Wells in your December issue on increasing the fishing license fee. I suppose that about every fisherman has bumped into the same situation as described by Wells but why pick on the kids if they beat you to it. On the contrary, let's feel proud and encourage more juveniles to fish with "pin and pole"; that's a fine start for the sportsmen-to-be and don't forget that they are the ones that will be buying fishing licenses in years to come and supporting conservation and improvement plans now formed and being executed.

The main argument for increasing the license fee fifty cents per year is to provide good fishing in the future for the "poor fisherman" and stop so far as possible the buying up of stream property by private interests thereby restricting public fishing grounds. I known that any proposed increase in fees is looked upon skeptically but when one knows what the money will be spent for and how it will improve your sport, it makes the dose easier to take. When the subject was first advanced there were many "doubting Thomases" on the possibility of its success so it was planned to explain the subject impartially to the members of a Fish and Game Club (350 members) in a rural community and obtain their reaction by vote. Surprising as it may seem the club voted unanimously in favor of the increase in spite of the fact that many members were unemployed and others below the higher brackets of income. Later the subject was discussed and voted on by the Schuylkill County Sportsmen's Association and was approved without a dissenting voice.

It is positively fixed that the money accrueing from the increase be definitely earmarked for the buying of water property, building of dams, protection of shorelines and supporting improvements. There is no fund now available to affect improvements and it must come from license fees. It would seem that the sportsmen of the State can take unusual pride in supporting this, their own plan, and thereby tremendously improving fishing conditions in the state for now and ever after.

Very sincerely yours,
Charles C. Squire, Pine Grove.

LATROBE SPORTSMEN PURCHASE FARM

The 60 acre farm of Phillip Roth in Derry Township, near the No. 7 Schoolhouse, was purchased by the Latrobe Sportsmen's Association.

The farm, containing two streams of water, a number of pine trees and other trees, may be easily converted into an ideal spot for outdoor sports of different kinds.

Erection of skeet shooting paraphernalia and a rifle range is contemplated by the sportsmen and they also plan to develop the fishing possibilities.

Building of a cabin and other improvements will be given early consideration.

There are 152 members of the Sportsmen's Association and they expect to be able to go through with their newest undertaking with little trouble providing full cooperation is accorded.

MILTON SPORTSMEN WILL RAISE PHEASANTS

Plans for a picnic July 28 were laid by the Milton Fish and Game Association at a meeting in the Moose Hall on South Front Street.

Members of the association heard a report on the construction of two ringneck pheasant pens. One pen, capable of holding 50 birds, has been erected at the Blue Spruce Tourist Camp south of town and the other, for 100 birds, has been placed at Marsh Park.

The pheasants are expected to arrive on July 1 and it is planned to hold them in the pens until after hunting season when they will be released in the territory surrounding Milton for the benefit of local hunters.

The group discussed the renewing of the lease for the junior fish pond at the lower end of town for this summer.

Discussion also was held on the river pollution problem and Kenneth M. Koch president of the club, reported on the progress of the project to eliminate the pollution. A sum of $129,000 is now available for the mine-sealing project and materials and equipment are being placed at the headwaters of the river so that operations will begin sometime before July 1. The program will require two years to complete.

Ninety per cent of the pollution has been attributed by government engineers to mine seepage, while ten per cent is said to be caused by industrial wastes.

Exceedingly heavy in girth was this 26 inch, 8 pound 8 ounce walleyed pike taken last year in the Susquehanna River near Wrightsville on a nightcrawler and spinner trolling combination. It was caught by Roy Fishel of Wrightsville, a member of the Susquehanna Fish and Game Association, who is shown with his catch.

CARLISLE FIELD DAY ANNOUNCED

Scheduled for July 20th at the Carlisle Country Club grounds the program for the Second Annual Field Day of the Carlisle Fish and Game Association has been announced as follows:

For Shooters—

1. Shotgun events
   (a) Trap shooting under national rules, shooters competing for prize awards under Lewis classification system.
   (b) Grouse hunt—a novelty trap event in which targets are unexpectedly thrown as shooter walks toward trap, prizes being awarded as above.
   (c) Skeet, 'shot under national rules with prizes as in above events.
   (d) Mo-Skeet-O, a miniature trap shooting event particularly attractive to women and younger shooters who shun recoil and costs of the regular trap events. Prizes for better scores.
2. Rifle events (National Rifle Association rules)
   (a) 50-yard prone, .22-caliber only; three prizes.
   (b) 50-yard off-hand, .22-caliber only; three prizes.
3. Pistol—25 yard, slow fire, .22-caliber only. Three prizes.

For Anglers—

1. Bait Casting
   (a) Distance casting—open to all using equipment complying with "Skish" rules, except that micrometered diameter test will be substituted for 9-pound lift test.
   (b) "Skish" accuracy—National "Skish" rules prevailing except as above.
   No cast will be scored in which the rod tip in the act of casting describes a circle. This rules out the whirling dervish form, but not the side-swipers. Considerations of safety to spectators have prompted the adoption of this rule by the Carlisle, Harrisburg, Mechanicsburg and New Cumberland clubs for their contests this year.
2. Fly Casting
   (a) Distance—Open to all whose equipment qualifies under "Skish" rules. Average of three longest casts made in three minutes of casting without time allowance for lost flies and no cast to count unless fly is attached.
   (b) "Skish" fly accuracy-Under "Skish" rules with exception that left hand and "flip" casts will be substituted for roll casting, the latter being impractical for land casting. Time allowance for lost fly.

For Archers—National 40-yard course, with prizes awarded under classification system similar to that in trap events.

Dart Throwing—Prizes to high scorers as in archery.

By general agreement the Carlisle, Harrisburg, Mechanicsburg, and New Cumberland clubs have agreed to abandon the former plan of classifying contests as "Professional" and "Amateur" on a basis of their winning an awarde in a former contest, and will award prizes in the casting contests on a classification of all contestants based on the principle involved in the Lewis plan used in trap-shooting.

To stimulate inter-club rivalry and promote the development of more and better casters in each club, to put a premium on the more expert casters coaching the tyros, and ultimately to conserve fish forage by encouraging the use of artificial lures, the Carlisle Fish and Game Association is this year introducing inter-club team competition, with an attractive plaque award to the team having the highest "team" score in the casting events. The "team" will comprise the five anglers from each club whose scores are highest in each of the four casting events. Any persons wishing to compete for their club should notify their club secretary who will in turn certify all names of such bonafide members to one or another of the members of an eligibility committee consisting of C. W. Fink, Carlisle, Charles Fox, New Cumberland, and Elwood Straub, of Mechanicsburg, Pa., so as to reach the committee not later than July 20th.

Inter-team competition will also occur under similar rules in the rifle and trap-shooting events, with beautiful plaques being awarded in each. In each of the three classes of events, the winning club will retain possession of the appropriate plaque for one year when it is to be placed in competition again. Should any club win a particular plaque two years in succession, it will retain the plaque permanently. The Carlisle sportsmen feel that this feature of inter-club competition will put a premium on the development of young casters and shooters whereas individual competition often operates to form a closed circle of a few more skillful who zealously guard against any imparting of skill to others, and further that there will be more widespread pleasure afield and perhaps less crippled game.

Should readers of The Angler seek information about the Carlisle Field Day they should correspond with either D. A. Hein, general chairman, or C. W. Fink, publicity chairman, both of Carlisle, Penna. Both will be glad to answer any queries relative to the events which will get under way at 10 A. M., July 20th, and last throughout the day. Gate prizes will be awarded to those holding admission tickets. Re-entries will be permitted in each event, with nominal fees being charged for each entry and re-entry.

Allentown Call Photo
The famous Little Lehigh yielded this fine 22 inch rainbow trout to the angling skill of Ralph Cressman of Allentown this season.

CLEARFIELD CASTING SCHOOL CLOSES

On Tuesday evening, April 30, the fly casting school that was conducted by the Y. M. C. A., in Clearfield, closed their third annual school. The work of the school this year far surpassed the work of any previous year, and more people availed themselves of this opportunity to either learn or practice their favorite sport than ever before.

The school was conducted on four consecutive Tuesday evenings with all of the casting done on the "Y" gym floor. The work of the first two Tuesdays was practice casting. In this work the members of the school practiced casting at various objects placed around the floor, and were instructed by a large number of competent fly casters. The work of the last two Tuesday evenings was divided between practice casting and competitive casting.

In the competitive casting five targets were placed around the floor at different positions and distances and each target was obstructed with either trees or rocks. Each person competing in the contest was required to make five casts at each target. Every hit counted a point and after four complete rounds a possible score of 100 could be made. The competing casters made two rounds on both closing Tuesdays. Competition in the contest was very keen and after the close of the school the following winners were announced.

First place—Maurice Hartsock.

Second place—Ralph H. Barton.

Third place—"Corky" Conner and F. J. Livingston (tie).

The Y. M. C. A. was very well pleased with the manner in which the school was conducted this year and the large number of individuals who participated. There were 54 members enrolled in the school.

WINDBER PICNIC

Approximately 125 persons attended a picnic of the Windber Sportsmen's Association held at the club's trout nursery at Ogletown. Lunch was served in the open and inspection made of the nursery property. The local sportsmen have cleaned and drained the big spring nursery ponds and also improved and enlarged the dam where the trout are placed after having reached sufficient size.

There are at present 125,000 fingerling trout received from the federal hatcheries in the spring rearing ponds.

The outing was one of a series designed to finance the recent expenses incident to rehabilitating the nursery. Blain Barefoot, president of the association, was in charge of the affair. Many Johnstown sportsmen attended.

A youth's mustache was the pioneer of the installment plan—a little "down" and then a little more each week.

OUTLINE PURPOSE OF TARENTUM CLUB

The Purpose of the Tarentum District Sportsmen's Club, Inc., is to aid and foster by education of the public, to promote, aid and encourage non-partisan legislation and policies of conservation of our natural resources, especially the conservation and restoration of our game, fish, forests and streams; to promote good fellowship and higher ethics among sportsmen; to conduct gun shoots, and target practice with firearms; to conduct social affairs and sports events; to provide facilities for social enjoyment to its members.

"SEA-SARPINT" SAM

Noah an' Jonah an' Cap'n John Smith,
Each told his puny but picturesque myth,
But I aims ter tell you a story so tall
As to make their fishin' tictaks seem small.
Now Noah he had backin' for the Lawd was on his side
And old hitch-hiker Jonah all he did was take a ride.
And Cap'n John Smith, the wust of the lot,
Was the fibberest-fisherman, believe it or not.
I knew the old ramrod in Indian fightin' time,
And if he'd ever caught one fish I wouldn't have writ this rhyme.

Why their stories are low down, trivial, small,
It's a wonder St. Pete let them in, one and all.
Now I reckon you're waitin' to hear my true story,
But I warn you beforehand it's gruesome 'n gory.

It happened way back, I was just ninety-five.
And sea-sarpint varmints were then much alive.
They overturned ships, drank up rivers 'n streams,
Blew smoke through their nostrils, let out weird screams.
Everyone was 'fraid of them all except me,
And when they came around I said, "Fiddle-d-dee".
Why I got so dern recklous I didn't give a damn,
And thereafter folks called me "Sea-Sarpint" Sam!

The bait that I used for these overgrown snails
Was a dozen or two of sixty-foot whales.
I tied 'em high on a mountain peak
And let 'em hang for most a week.
And though the smell nearly knocked me down
The sarpints came from miles around.
They weren't afeared of man or beast
And they wanted in on this little feast.
Then I'd wade in with my bowie knife
And stab and swear (that was the life!)
The blood ran thick, the varmints screamed,
Such a nightmare you've never dreamed.
They charged at me sometimes ten at a time,
Mouths open and smellin' of carnage and grime.
Then I'd grab one quick-like by the tail,
Spin around and watch it sail.
Why our fights lasted a month or more
And the rivers filled with their blood and gore.
'Till at last only one sarpint was alive
For I'd killed nine hundred and sixty-five.
So I let this fishy varmint go
And he's livin' yet, this fact I know,
For don't folks see 'im every year or so?

Noah an' Jonah an' Cap'n John Smith
Each heard this true story for it was no myth.
When fishermen gathered they were quiet as a clam
For they couldn't equal the story of old "Sea-Sarpint" Sam!

RICHARDSON WINS FISHING CONTEST

Lack of fish prevented Ben Franklin's champion fishermen from completing the contest which took place along the banks of Neshannock Creek, between the East Washington and South Jefferson Street bridges at New Castle, only four legal sized fish being taken.

Robert Richardson was adjudged the winner with two fish, six inches in length or over, catching the largest which was a nice little rainbow trout. He also snared a sucker.

John Matteo took second place honors with two suckers, although one of them was a scant six inches long.

Around 75 boys took part in the contest and if there had been any more fish in the stream, they would have caught them, as they had the fishing area pretty well covered.

Quite a number of spectators watched the proceedings and offered encouragement to their favorites but that didn't bring in any more fish.

All kinds of fishing tackle was put to use by the boys, some of whom had real layouts, with fishing boots, creels, and what have you. For the most part, however, the common, ordinary schoolboy variety of fishing tackle was found.

They promise a real "blitzgreig" on the quarry pond fish later, and some fine catches are expected although there is quite an argument among fishermen as to the actual worth of a carp. They provide sport, however, and that is what the boys are after more than anything else.

Coach Emmett Gillaspie presided, and was assisted by William Wallace, Paul Cuba, and James Bowman of the Ben Franklin faculty.

Fish Warden "Rosy" White was chief judge, but his duties were rather limited, the task of picking the winner involving no hair-splitting.

CEDAR RUN LAUDED AS TROUT WATER

Comments Chas. H. Nehf in his livewire column "Field Sports" in the Allentown Morning Call:

One major item which the trout fishing contest, sponsored by the Witwer-Jones sporting goods store, brought to the attention of local fishermen was the possibility of having Cedar Creek pond as an approved and state stocked trout water. Cedar Creek itself is listed for a stocking of trout but not the pond.

Could it support fish? Many observations made would prove the value of such a move. For the information of our readers each point, as overheard in discussions, will be placed as follows:

1. Trout food. One of the trout caught during the contest contained 19 minnows. While his stomach was packed to overflowing the brownie was greedy enough to strike at a plug and get caught. Among the 19 minnows was a small sucker measuring 3¼ inches in length. Incidentally the trout itself was only 15 inches in length.

For the person who has walked along the pond it is not unusual to see schools of minnows numbering several score. Apparently the abundant natural food which the stocked trout had was one reason why the catch was so small. The limestone water and the heavy water grasses which also find their home in the pond serves as a haven and breeding place for untold forms of aquatic insect life.

2. Water area. It is our guess that the pond contains about five acres of water area. With no one able to use a boat the trout could find an excellent haven in the center where it was too far for the anglers, with their artificial lures, to cast.

3. Water temperature. A liberal planting of weeping willow trees along the banks of the pond would not only serve to reduce the temperature of the water during the summer months but it would also add untold beauty to other recreation seekers in the park area. Trees, when they are small, may prove an obstacle to the fly or bait caster, but their foliage provides a place for insect life which falls into the water and furnishes food for the fish.

Right proud of this nice brown trout taken at the Spring Creek Project last year was five year old Joseph Bogle, Jr. He had accompanied his father, Joseph Bogle, Sr., of Milton on the day he scored the catch.

HERE AND THERE IN ANGLERDOM

Central Pennsylvania sportsmen are looking forward to two outstanding events during the next six weeks, the annual field day of the Carlisle Sportsmen's Association, to be held at the Carlisle County Club on July 20, and the field day sponsored by the Harrisburg, Mechanicsburg and New Cumberland Sportsmen's Associations on August 17. The event on August 17 will be held at Hempt's Meadow along the Yellow Breeches Creek, and the program includes 16 shooting, casting and archery events in which prizes having a total value of $530 will be awarded. In event of rain the field day will be held the following Saturday. To reach the scene of the meet, four miles from Harrisburg in Cumberland County, roads will be marked from Lemoyne, White Hill, New Cumberland, Mechanicsburg and the junction of the Carlisle and Gettysburg pikes. Events scheduled include standard trap shooting, bounding rabbit target for shotguns, two running deer and a rising bear target for large bore rifles at 100 yards, pistol shooting, a block shoot, archery, three small bore targets including a standard range, and fly and bait casting, both distance and accuracy. A good commissary and free parking are features, and it is suggested that participants in the various events bring their own arms and fishing tackle. Ammunition will be sold on the grounds. Chas K. Fox, secretary of the New Cumberland Sportsmen's Association, and Field Day Chairman this year reports that 3000 sportsmen, including some of the best casters and shots in the state, attended last year's field day.

Although an ardent user of artificials, Willie Walters of Sewickley changed tactics one day last bass season on the upper Allegheny to excellent advantage. He writes: "I fish with artificial lures but this bass I caught on the flyrod with a live frog and using a size 4 hook. The fishing had been poor that day and I tried a live frog that I had caught. It was the first time I used a frog, the day was hot and the time about noon. I rowed out to the middle of the river, anchored and left the frog drift with the current. The bait was not more than fourteen feet downstream when this bass hit. He kept going until he had all but a couple of feet of line stripped from the reel and I stopped him. It was a good thing that my flyrod is a good one for it certainly did bend almost double. He stripped line from my reel three times before I was able to land him. I have caught bigger bass but never had one give me a battle such as this fellow did. This smallmouth bass was 20½ inches in length and weighed 4 pounds 2 ounces".

Britt Butler of Robertsdale mixes plugging with his trolling in fishing the Raystown Branch of the Juniata River and reports excellent results. Last season he took a hefty smallmouth bass, 18½ inches in length and 14 inches in girth on a plug with scale finish. He also landed three wall-eyed pike, 25 inches, 17 inches and 21 inches in length while trolling with a weighted June bug spinner. The catches were scored late in October.

Fishing in Lake Wallenpaupack, R. Frank Kramer, Webster Heiser and Bud Walborn of Orwigsburg scored a catch of 14 walleyed pike that averaged between 20 and 21 inches in length one day last season.

The heaviest brown trout reported from Blair County streams last season by Warden Lincoln Lender of Bellwood, was a Piney Creek fish taken by Mike Conrad, expert minnow fisherman of Ganister. His catch measured 26 inches in length and tipped the scales at 7 pounds 8 ounces. He also landed a number of other trout measuring from 15 to 17 inches in length in this limestone stream.

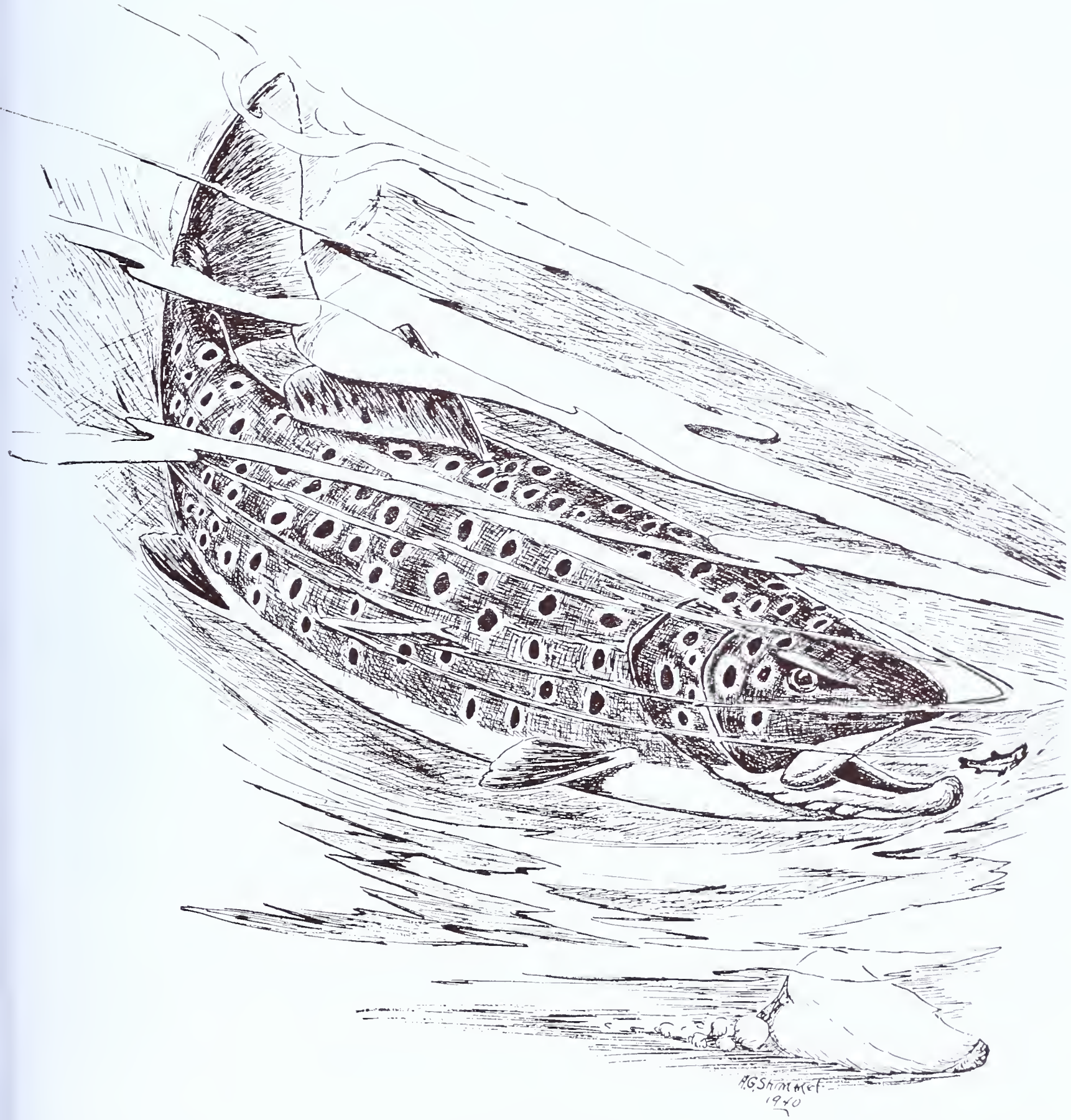
Willis Bright with a fine catch of bullhead catfish taken in Huster's Dam. Photo by Robert E. Dively.

There's a musky of stupendous proportions in French Creek that has fishermen in the vicinity of Saegertown agog, according to Charles Apple of Saegertown. He writes: "The truth is I have been after this large 'lunge for five years and had him hooked three times but he always broke loose. This 'lunge was in captivity in a fountain at the Saegertown Inn, 15 or more years ago and was finally released, but has grown to a size that varies according to the fisherman who sees him. I would judge him to weigh 35 pounds at least. His home is under a large sunken stump in a deep hole of about 12 feet of water. He is very shrewd and has gained quite a lot of popularity around this section. Smaller muskellunge have been caught in French Creek at this point but he is still at large".

One of the largest walleyed pike to be taken in recent years from Loyalsock Creek in Lycoming County was caught last year by Dallas Stine of Slabtown. Although blind, Mr. Stine's greatest satisfaction in life comes with fishing. He scored the catch in the deep hole opposite the Game Farm, the fish measured 29½ inches in length and tipping the scales at 7 pounds 10 ounces while his son was rowing the boat from which he fished. Several other fine fish taken by Lycoming anglers were reported last season. D. L. Crandall of Duboistown caught a walleyed pike 25¾ inches in length and weighing 6 pounds 8 ounces while fishing in Lake Nepahwin, Bradford County. Pine Creek yielded a 24½ inch walleye to Ralph Holtman of South Williamsport while Donald Gouldy of Williamsport scored with a 20 inch smallmouth in the same stream. It weighed 4 pounds 7 ounces.

R. L. Watts, formerly Dean at State College, and an ardent trout fisherman, demonstrated that dry flies may be effective even when water temperatures in our trout streams are way down, according to Warden George Cross of Hammersley Fork. He writes concerning the opening day of the trout season this year: "The water tested 34 but in spite of that R. L. Watts of State College, retired, showed the boys how to take trout on flies, and demonstrated that this is the proper method in taking fish. He caught the limit but didn't kill that many". Nice going, Dean.

A fine catch of suckers was scored by W. A. Yost of Harrisburg in Yellow Breeches Creek, Cumberland County. His catch ranged in length from 14 to 16 inches.



Sketch by A. G. Shimmel.

FORAGING BROWN TROUT.

USE A PLUG

AND

SAVE A CHUB!

PENNSYLVANIA ANGLER

SMALL MOUTH BASS

P38.21
1.6.

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PENNSYLVANIA ANGLER

AUGUST 1940

EDITORIAL

CONTROLLED BASS CULTURE

INTENSE investigation and study of bass culture has been taking place in Pennsylvania in the past few years. This work is revolutionizing the growing of bass and also bringing to light a number of new methods that can and are being applied to the culture of other pond fishes.

When bass-growing was first seriously undertaken, it was generally acknowledged that the fish could not be grown except in large ponds of an acre or more, and hatcheries were built according to this idea; the large pond was necessary because of the opinion that small bass could not be induced to take artificial food, and because little was known about the culture of the daphnia—the organism that is very vital as food for the very young fish. The number of bass fry that could be placed in a given area was dependent upon the amount of daphnia that nature would produce in the ponds, and as the fish passed beyond this feeding, they were supplied with live minnows—produced directly in the bass fry pond or hatched in separate pools and transferred to these areas. This was more or less a duplication of nature's method, and usually resulted in a very small yield because the result was dependent upon many things that could not be controlled by those in charge.

Later, knowledge was gained on how to grow daphnia in huge quantities, and it was also found that bass could be induced to take other than live food. These advancements showed large pools were not suitable for growing the bass by this method and resulted in the redesigning or new construction of smaller pools.

The artificial culture of daphnia, the feeding of artificial food to the small bass, and the use of smaller ponds for the baby fish, was the first major forward-step in this work. The advantage of the smaller pools via the larger ones was (1) Bass of different hatching periods could be more easily kept separated. (2) Pools could be more thoroughly cleaned and sterilized. (3) A larger percent of the bass could be induced to take artificial food, resulting in a more uniform growth, which tends to somewhat reduce cannibalism.

While the smaller pool had these and other advantages over the larger ones, it still left much of the results to factors that could not be entirely controlled. The use of the smaller areas lead to the thought that the closer the bass could be kept under control during their first growing period, the better the outcome would be, and this terminated in experiments with the use of tanks and screened floating boxes for this work. The results have been so satisfactory that this year the Board has in operation at the different plants, 185 tanks and 200 boxes, with 100 additional tanks under construction for next year's use.

At some future time an article will appear in the ANGLER giving in detail the method used. Briefly this system appears to have the following advantages over the pond culture:

Reduces labor costs—one attendant can care for and feed more bass in the confined areas, than is generally the case in the pools.

Better sanitation, as the tanks and boxes can be cleaned daily.

Absolute control over predators such as water beetles, water tigers, etc.

Control over cannibalism, as the fish can be sorted at frequent intervals.

Better observation and control over fish parasites or diseases.

It is also the opinion of your Board that much more satisfactory results will be had when bass are stocked of a much larger size than are being planted at the present time. From the studies made in this work in the past several years, it is thought that this will be a reality in the not too-distant future. When this is brought about pools that formerly were used to hold the bass through their first growing period, will be utilized for the growing of the bass through their second growth period, and tanks or boxes taking the place of the pool now in use for the baby fish, thus bringing about this change without the necessity of building additional pools for this purpose.

C. A. French

Commissioner of Fisheries

EATING OUR CAKE

By N. R. CASILLO

THE time is rapidly approaching in all states east of the Rockies when creel limits of fish will be of secondary importance; meaning, of course, that a day astream will mean more than the mere capture of fish. Limits will be reduced to a minimum, perhaps to a brace of game fish per day. And I believe that any howls forthcoming will not emanate from the angler. Politicians and others with an axe to grind will do all the loud lamenting. The small percentage of 'meat" fishermen in our midst are scarcely worth inclusion.

Practically all fishermen in this Commonwealth know that going out with the avowed purpose of dragging home a huge string of trout or bass for inclusion as the main course in a community fish fry, is a thing of the past. Indeed, I can think of nothing more incongruous and basely gross than a vast catch of eight or ten-inch trout. It is my opinion that the catching and particularly the eating of a reasonable number of trout should be deemed a privilege.

I shall not soon forget the experience that I had last summer of sitting down before a huge platter heaped high with a mound of tastefully browned fish; thin, wispy morsels ranging from five to perhaps seven inches in length. After inhaling a dozen or so I decided to ask my hosts what they were.

'Trout," a couple of them sounded off.

"Trout!" I echoed. I might have guessed them to me smelt, but I never dreamed of trout.

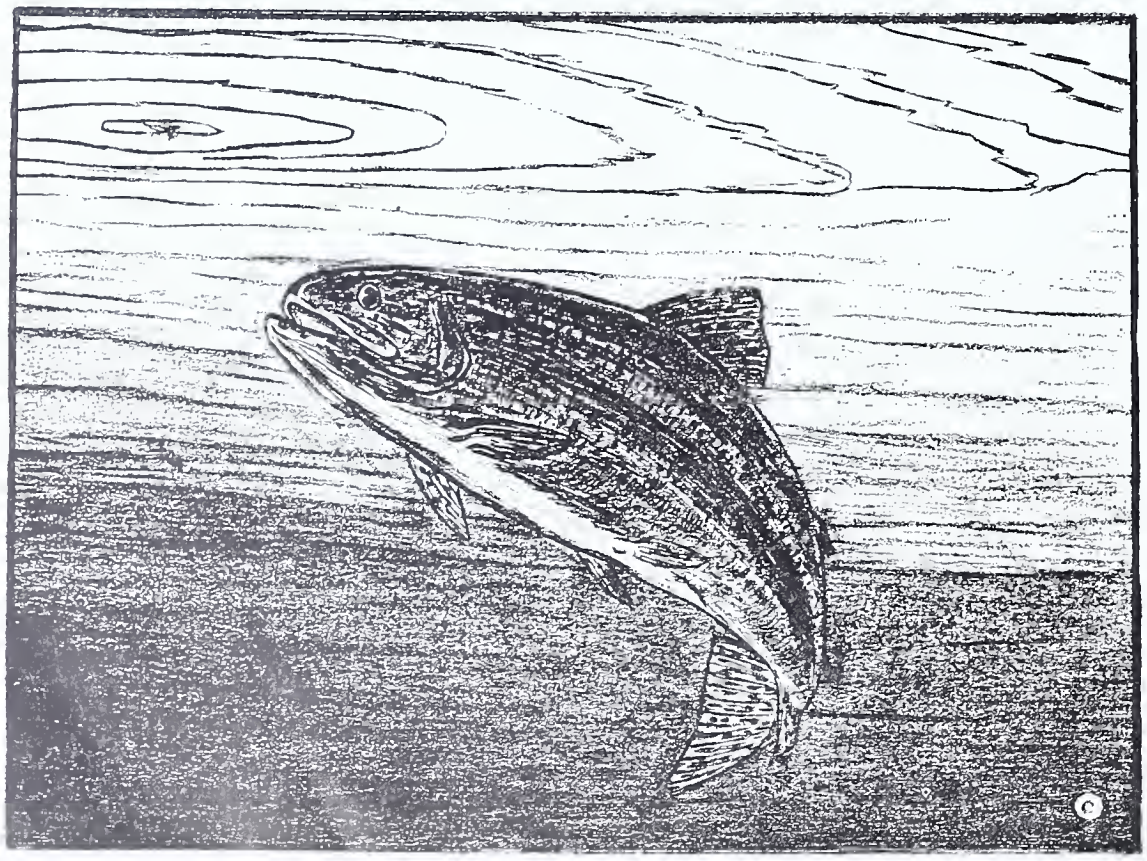
A little later on it was explained to me that that state has no minimum size limit on their trout. They figure that if a fisherman is a sportsman he will not retain undersize fish. And again, they believe that very few undersize trout survive even superficial hook wounds and subsequent handling by the average fisherman

When I went fishing on the following day I was treated to another surprise. Men in motor and row boats were assiduously engaged in catching *vast* quantities of what they termed summer steelheads. Their average length I guessed to be around seven inches.

Forty or fifty years ago it was a common occurrence for a fisherman to return from a morning's sojourn with a creel of forty, fifty or even more trout. Admittedly huge catches you will agree. However, upon investigation it wil be discovered that the fish were seldom more than eight inches long. When one of a foot was caught it was recorded as an unusual event.

How infinitely more pleasurable it is for the fisherman of today; no one knows when he may tie into a big brownie that may be lurking under a snag in his favorite pool. Is there a fisherman amongst you who when approaching a likely spot on a good stream does not think that perhaps he may snag the fish of his dreams? Now then, just think of the delightful anticipation and the thrilling anxiety entailed in harboring such thoughts as you whip out your fly or lure from behind an obscuring bush or tree.

A year ago while on a pre-season inspection trip of the Scrubgrass in Venango County I espied the lair of a big rainbow. Oh, I could conjure some high voltage poundage, but suffice it to say that he was a big rainbow. Time and again I saw him amble to the surface, slap down an insect and then slide back into position down between two large rocks easily discernible in the lambent depths of the pool. Right then and there I inaugurated a campaign for his undoing.



There was still a week before the opening day and I spent a considerable portion of it prying into the home life of that magnificent fish.

On the eve of the opener I returned home with a tight feeling of anticipation gripping my heart. I was so steamed up that I was on my way shortly after midnight. No kidding, I was afraid that some earlier bird would snag what I considered *my* rightful quarry.

At 1:10 A. M., I was on the field of battle whipping the surface of the inky pool with what I implicitly believe to be the original progenitor of that Hellcat strain of dogs that one reads so much about these days.

In the course of an hour I switched to several variants of the "killer" with which I started. Then, followed light bucktails, more streamers and finally some feather minnows. No soap, so I sat down, lit a cigarette and began cogitating on the situation.

At 2:15 it was dark, but not dark enough to obscure an occasional glint of the restless water, the border of rocks edging the stream and the phosphorescent play of the current. Then, the memory of a long bygone night flashed into my brain. I recalled a catch of trout that I invcigled with an infinitesimal black gnat dressed on a No. 20 Carlisle hook. The fish on that memorable occasion struck avidly and frequently and yet, it was too dark to see a hand held close to your face.

So, casting my unfinished cigarette aside I hurriedly selected a black gnat and bent it to my leader. For another half hour I futilely lashed every square foot of that water from every conceivable angle before calling a halt.

The beam of my flashlight directed into the clear water disclosed an empty lair. Mr. Rainbow was not at home but sprawled atop one of the flat rocks was a big waterdog. The situation was none too encouraging so I returned to the car to wait for daylight. In the meanwhile I hoped fervently that the ugly salamander would hie off to parts unknown.

Of course I fell asleep (nearly freezing in the process), but I was back on the stream shortly after daylight. A thick fog shrouded everything. I ambled on toward my objective and arrived there just as a rustic was in the act of snaking a big fish out of the water. My heart sunk as he held it up.

"Nice fish haint it?" he grinned as the noble rainbow endeavored to break the strangle hold that the man had about its gills.

"Yulp," I swallowed and sat down on a handy rock, lighting a cigarette for solace.

Without further ado the man stuffed the quivering fish into the lining of his coat and shuffled on downstream. I was sick with disappointment or maybe it was that cigarette on an empty stomach.

After the fellow disappeared around a bend I got out my fly box and dragged out what I've recently christened *Black Cerberus* (after that three-headed dog of Pluto at the gates of Hades), and leashed it to my leader. That doggone streamer can almost snarl it's that

ornery. With a vicious, short cast I whipped it out onto the water.

Now, I can't swear to this because it all took place so quickly. Anyway, to this day I'm not certain but what old Cerb bared his teeth and actually sank them into the investigative fish that rose to meet him. Boy, what a fight! That fish dragged Cerberus here and anon until all of his figurative heads were in a whirl. But he hung on with his usual doggedness until the rainbow was brought to net. As near as a befogged memory could determine the fish was larger than the one that I had seen caught but a few minutes before. Indeed, I knew it to be *my* rainbow.

Did I continue fishing? Postitvely not. I was satisfied, so I unleashed my trusty but ferocious streamer and kicked him back into his kennel. Then for an hour or so I watched the steady parade of fishermen trample the new grass into the obscurity of a well-worn towpath. Occasionally of course, I exhibited my trophy to give them a bit of encouragement.

Consider that man fortunate who can suspend his activities on a trout stream long enough to lie down for a nap or just bask in the sun. In most instances he that takes it liesurely will catch as many fish as the chap who is all bustle and hustle and wears himself out jumping from one spot to another. The former takes advantage of the very thing for which trout streams were created—the re-creation of man. And you will admit that a man does feel vastly different after a day astream.

Every angler has formulated some sort of philosophy in connection with his sport even though he may not be aware of it. Legion are those who spend an entire day futilely tramping a stream without anything to show for it except perhaps, an empty stomach and aching muscles. Yet, many of them will scarcely utter a single word of protest or disgust. Most of them will pass it off by saying: "Oh well, I had a good time."

Naturally we all like to catch fish, but do not consider that day lost whose low descending sun sees so plainly that you were skunked (and I do hope that I may be forgiven for mutilating Mr. Longfellow's pretty lines).

First of all a fisherman is an outdoorsman, for he would not be one if he were not the other. I have yet to see an angler of my acquaintance who goes fishing consumed by the single desire to catch fish. And how many fishermen give up the sport because they don't catch fish on every sally? About as many as there are golfers who give up golf because they don't shoot par. Fishing is conducive to a philosophical turn of mind, so how can a fisherman escape being a philosopher if he pursues his sport with understanding.

Once a chap asked me why fishing was called a sport when there were so many opportunities for its numerous devotees to flagrantly break the rules.

"That's paradoxical," I replied. "A fisherman is tickled to death when he kills a nice string of fish. Yet, when the fish get a break and he catches none, he grumbles. That chap," I added, "does not have a philosophical outlook and is a poor sport in the bargain."

When fish experience a day when things are in their favor I like to think that they get together even as fishermen do to talk

Big Run in Lawrence County on the eve of the 1940 trout season opening day.

things over—and gloat. For that day at least they have bested the anglers. And after all, that element of uncertainty is really what makes fishing the grand sport that it is.

A few days before the opening day of trout season I chanced to be in a local alderman's office. As usual the place was filled with fishermen engaged in their usual pastime when not fishing. One fellow was plaintively howling. He lamented the passing of those halcyon days when a fisherman could go out and get himself a mess of trout.

"Just what do you mean by a mess?" croaked an ancient chap, champing his jaws as his "chaw" nearly slipped past a single surviving incisor.

"I mean the limit—and that nowadays isn't enough for a decent meal," complained the vastly younger man.

"Harh," rasped the oldster, "the limit even today is too many for any one man." Then he added: "It's blamed easy to see that you're a fisherman."

The other looked a bit bewildered because he did not get the old timer's innuendo. A couple of snickers from the bystanders didn't help matters much either. "What do you mean by that crack?" he finally asked.

"Harh, just as I thought. You don't know the difference between a fisherman and an angler do you?"

The young man admitted his ignorance by registering a decidedly puzzled expression. The onlookers did likewise.

"Wal, you never heard a market fisherman called an angler," came the not-so-cryptic reply to the battery of questioning looks, as the eighty-seven year old man (lives here in town and opened the 1940 trout season), hoarsely cackled.

"Meaning, I suppose, that you've never taken the limit," sneered the other.

"On the contrary young feller, I've taken it many a time when limits could safely be had and fishermen were few and far between. Today," he added, "a brace of fair fish should be enough for anyone."

"What would be the use of going out just for a couple of fish?"

The old fellow's dull eyes gave a momentary glint. His reply was slow and measured. "Do you know that it's next to impossible to find a creek in this whole state where one can catch an honest-to-goodness *wild* trout? And by wild trout I mean those that hatched and developed to maturity in the streams themselves." He paused, drew a deep breath and smilingly added: "Wal, I guess in your case you could go out after them two trout."

The old angler said a mouthful. More and more of our streams are rapidly becoming temporary repositories for the storage of hatchery trout until that time when they are caught or are destroyed because of unfavorable conditions.

Solution of the situation? Sure. Improve our waters, halve the catch limit and have double-edged laws and law enforcement. In other words, the sportsmen of this Commonwealth should improve stream conditions until they are commensurable to the magnicent systems of fish production and distribution as lately developed by our Fish Commission; see that laws are adequately administered and enforced, and most important, to personally observe them. Sounds simple doesn't it. Frankly, it is, and that's why the situation is paradoxical. Conclusively, if we would, we can eat our cake and still have it.

Every reel should be taken apart and washed in gasoline at least once a year. This removes all the accumulated grit from the moving parts, and will add years to the life of the reel. Of course, it should be thoroughly lubricated before re-assembly.

CONSERVATION TEACHING

Camp Hill Club Points Way in School Conservation

IT was one of those rare days in late spring, cool and cloudless. The Conodoguinet slid smoothly over its limestone bed clear for the first time in many weeks. Rumors had been coming in that the largest trout stocked in Silver Spring Lake had moved down into the Conodoguinet and were being taken on wet flies. Now I am the type of fly fisherman who needs a lot of room and here at last it seemed to me was the answer to my prayer. I put on a Silver Doctor, let it drift sideways into the current, pulled the tip high, gave it the old motion and nothing happened. So it went, doctor, belle, beau, coachman, quill and still nothing happened. Now I'm not one to discourage easily and I have infinite patience when it comes to waiting out the brook, brown and bow but what got me was the fact that about 300 yards downstream were two boys I judged to be somewhere between the ages of 12 to 15 pulling out fish after fish. Finally the desire to find out what they were using could not be resisted any longer so I reeled in and made my way to the favored grandsons of Izaak Walton for some enlightenment. Just as I reached them the youngest of the two hooked into one that made his leader cut into the water in jig-saw circles dashing first to one side, racing straight toward him, veering sharply to the right, then in a flash cutting a double circle and straightening out in a swift dash straight ahead.

They start out early on angling jaunts these days.

Now I have fished for trout a long time but I have yet to see one cut such a crazy underwater pattern as was being presented here. Finally the youngster, tip held high, giving the fish all the resilience of the rod, brought him to net in a fashion befitting that of an expert.

"Let's have a look at him, Sonny", I said and there in the net lay one of all things a rock bass. "So that's what you fellows have been catching?"

The tone of my voice must have conveyed to my young friends the disdain I held for the lowly rock bass for the older boy said, "It's really great sport, Mister, and you will have a lot of fun. Here try my outfit".

With that he handed over to me his 9 ft. 4½ ounce fly rod and I couldn't but help noticing that the oiled "D" line was just right for that particular rod. Attached to the line was a 9 ft. 3x leader and the lure was a Yellow Quill. The other boy's outfit was almost identical with the exception that he was using a 7½ ft. leader.

After a number of casts I hooked into one of the "solid rocks" and was convinced that I had been missing some of the greatest sport to be had with rod and line.

Now in 18 years of fishing one meets all kinds of fishermen along the streams and lakes of this grand old state, some we remember and some you wish you could forget but these two boys I decided really had something. I was more convinced of this than ever when I asked them what they were going to do with the fish they had caught.

"Oh those, Mister? Why we've released all of them today—occasionally we keep a few but that's not important. It's the sport that we like. John here tied the flies we have been using and we were just trying them out."

Well, you could have knocked me over with a bi-visible. My recollections of youngsters who have been fishing including myself when young—was an old crooked pole, a large string of fish (the more one brought home the greater the fisherman he was thought to be). Now the young boy with the crooked pole and the large string of fish, who made the well equipped fisherman look bad, may have his place in poetry and song but to me he is just the embryo meat fisherman. That is the reason these two boys who fish for sport alone impressed me so much.

So I said, "Look fellows, if you have a little time I'd like to ask you a few questions. Tell me, where did you learn all this. You know about outfitting yourselves, tying flies, knowing where the fish hide out. Did your Dad have anything to do with it? Dads usually start their sons off fishing or hunting. The only trouble is that there are not enough of that type of Dad for all the sons we have around".

The older of the two boys shifted his booted legs and began to unfold the story which I now pass along to you readers hoping that it may be the basis of a similar program of education for our boys and girls who love the great outdoors.

"You see, Sir", he said, "John and I go to Camp Hill High School. During the first month of the school year we are asked to enter into a club activity of one hour each week. We had a lot of clubs to choose from—science club, stamp club, music club and a lot of others. But this fall for the first time

Cane pole, rod and reel and cut pole are featured in the tackle of this group of boy fishermen.

Questions fly thick and fast when student groups gather about a fish display.

we saw on the list a Wildlife Club which was to be sponsored by Mr. Maguire one of our teachers and coaches at Camp Hill. John and I were interested right away. Liking the outdoors as we do we joined this club. At the first meeting Mr. Maguire outlined the purpose of the club and the type of program we would follow throughout the year".

I interrupted him here by asking, "How many boys joined up in the club? Were there many students interested in it?"

"Oh, Yes," John piped up,! "our club was limited to 30 members but I am quite sure a larger number would have like to have joined".

The older of the two then chimed in and said, "Why don't you drop in and have a talk with Mr. Maguire. I'm sure he wouldn't mind and he could give you much more information about it than John or I and besides its getting rather late and although we would like to talk some more about our club we both have some work to do at home and that means so long, Mister, but we hope to meet you again".

Thanking the boys and wishing them lots of luck and happy hours along the stream we said bood-bye.

While putting away my tackle I began to think. Alex would like to hear about this so the next day I dropped in on Alex, our editor, and told him about the boys. He thought it would be a good idea to get some first hand information on any club that helps boys become good fishermen and guide them toward a love for the great outdoors. So he said, "Doc, go over to Camp Hill and get everything you can on this club".

So the next day I introduced myself and told Mr. Maguire the nature of my visit.

"You see, Doc"' said Mr. Maguire, "when I was a youngster I was fortunate in having an uncle who had guns, bird dogs, rifles and plenty of fishing tackle and what is more important he knew how to use it. Well, it was from this uncle of mine that I acquired a love for hunting and fishing and a knowledge of the sport that is to be had in the great outdoors. Now all young boys don't have dads and uncles like mine and never come in contact with fishing or fishing equipment until they are grown men and even then a large percentage lapse into sedentary middle age". Here I interrupted him and asked him if he had ever heard the aphorism: "Allah does not subtract from the allotted span of a man's life the time he spends in fishing".

"No, I never heard it", he said, "but it is quite true. Fishing indeed more than any other sport keeps one young and gives us surcease from the cares of the world. Well, getting back to the subject at hand I had been teaching for five years and each year I noticed that very few of the High and Junior High School students had any interest in hunting and fishing. Now to me that was a challenge and I decided to do something about it. First, I talked it over with our Superintendent Mr. Kline and in our conversation the fact was brought out that with modern machinery and modern industrial methods the average individual has more leisure time than at any period in the history of the world and that the real problem of our time is to educate our people for the correct use of their extra hours. I outlined my idea to him for the formation of a wildlife club in our school which would give the students a basic background in fishing, hunting and conservation of our wildlife. Mr. Kline agreed that it would be a fine thing and gave me his permission for the formation of the club.

"The club was composed of thirty members and we had the usual officers, president, vice-president, secretary and treasurer. The first five meetings we had we discussed the various types of fish to be found in the lakes and streams of Pennsylvania. Now here was an excellent chance to cooperate with the biology course and each member was given a certain fish and was required to discuss its coloring, structure, habitat, feeding habits and spawning periods. Then we discussed the lakes and streams in Cumberland and adjacent counties and what fish and aquatic life we can expect to find in them, what conditions made one stream a

(Continued on Page 19)

A fish display is certain to arouse keen interest in Pennsylvania's future anglers and anglerettes.

GIVE 'EM WHAT THEY WANT

By ELWYN A. NELLIS

FISHING offers more in the line of relaxation and boasts of a greater following than any other sport. The barefoot boy with cut pole, store twine, bent pin and can of worms is as much a participant as the banker, lawyer or doctor with his expensive equipment. Each finds enjoyment and relaxation in his own interpretation of the sport, but each is an extreme.

In order to receive the full benefits which fishing has to offer, it is not necessary to slip into the semi-coma of mid-summer afternoon by a shaded brook and the barefoot boy category; nor is it necessary to dip deeply into the savings account for costly gear and tackle. A point between the two, coupled with a reasonable amount of skill, is most desirable.

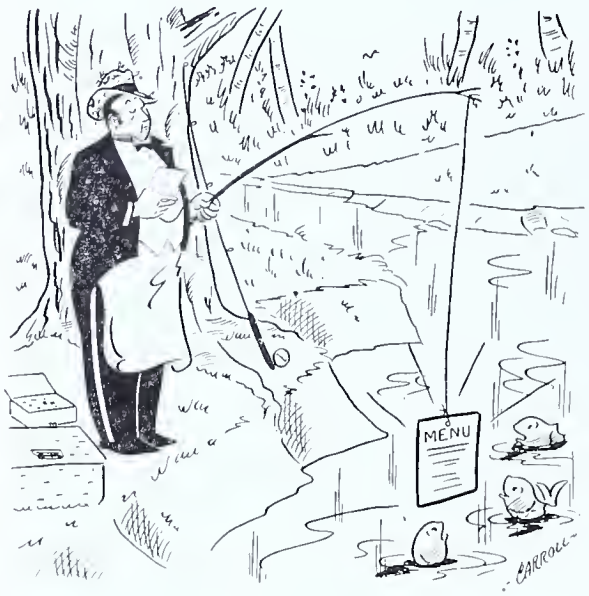
Fishing is no longer a matter of placing a worm on a hook and dunking it in the water. It has dropped its swaddling clothes and has stepped forth into the full bloom of manhood. The sport has even passed through that period of adolescence when, in order to be an angler, it was necessary to be a licensed surveyor and meteorologist as well. Even today there are those who adhere, and perhaps rightly so, to barometric readings and lunar calculations. However, to my way of thinking, these bits of scientific fishing are not far enough advanced to be considered here.

The element of chance plays an important part in the art of fishing. It always will. It can, however, be greatly diminished by the application of skill. Briefly, it can be said that proficiency in the sport consists of three things: Knowledge of piscatorial habits, skill in handling tackle, and the ability to choose the right kind of bait for the right time.

A working knowledge of piscatorial habits can be acquired through a little study. An angler can soon learn where to look for fish in any lake or stream even if he has never been there before. After he has learned the conditions under which the different species live, he will not be forced to waste valuable time fishing in spots where no fish are to be found.

For years trout fishermen have known the value of this information and are consequently further advanced in the art of fishing than their brother bass and pickerel fishermen. They know where the browns and brookies lie and look with scorn upon the trial and error method. Lake fishermen are gradually coming into their own, however, and are realizing the futility of fishing for bass in fifty feet of water regardless of their other skill.

Aptitude in handling tackle comes with practice. To aid in acquiring this proficiency, bait and tackle companies are placing lighter and better tackle on the market. Such equipment permits greater accuracy and aids in placing lures upon the water with a minimum of splash. Many sporting goods stores are lagging behind, however, and are continuing to offer casting rods which would serve as wagon axles and lines which would hold a Monday's wash in the country.



The element of chance can be completely eliminated from the first two prerequisites, but even though the application of skill can greatly minimize its effects in the third, it will always be present to some degree. Generally speaking, the knowledge of the right bait to use at the right time can be boiled down to "Give them what they want". It is not as simple as that, though, for the crux of the situation is to find out just what they do want.

In the matter of correct bait to use there is one generalization which can be applied: A fish strikes because it is hungry and decides the bait is food, or because it is angry. I firmly believe that it is an impossibility to write a treatise on how to catch fish by making them angry. I remember reading years ago about a bass angrily biting the toes of bathers, eventually driving them from the beach. Far be it from me to recommend the dangling of one's toes in the water, especially in June, just to make a bass angry. Although it is entirely possible to tantalize a fish into striking, especially at an artificial bait, the times it can be done are so unpredictable that the manner of catching them through their appetites only will be considered here.

The problem of bait fishermen is rather simple in comparison to the multitudinous one facing the caster or fly fisherman. This is because his field of choice is comparatively limited. In the first instance he has the worm which seems to be a natural food almost universally. In addition he has the clipper or helgramite, the crayfish, the frog, the bass bug, the lamprey eel, and a whole assortment of shiners, minnows, small suckers, perch, dace and the like. In rare instances small birds, mice and bats have been known to make excellent baits.

Even in this sphere of limited enticements the angler must remember one thing—to fish with a bait which is a natural food to the lake or stream being fished. For example, one's efforts will be to little or no avail if crayfish are used as bait when there are no crayfish in the lake or stream as a natural food. In some lakes bass will fight to impale themselves upon a hook with a frog while in others they are taken only half heartedly, if at all. The reasoning here is that some lakes are a more natural habitat for frogs than others.

To further intensify the problem, a bait may be excellent one day or one week and an extremely poor one the next. For that matter, bass, which are ravenous and prolifiic feeders, may take one kind of bait in the morning and an entirely different kind in the evening of the same day.

I recall, several years ago, when the bass in the Wallenpaupack were very partial to small live frogs. Inveterate casters and fly fishermen were deserting their cults for bait fishing. And then suddenly the bass stopped feeding.

By way of explanation, frogs were abundant that year and an easy prey for the fish. As the frogs became scarce as well as larger, they no longer presented an easy meal ticket. The bass were forced to forage elsewhere for their dinners. They turned up their noses at frogs entirely but anglers continued fishing with them to their sorrow.

For consistent takes an angler would be better off if he ascertained in advance whether or not the bait he contemplated using was a natural food, or a copy in the case of artificial baits, in the place he intends to fish. This can be established by a short scouting trip along the shore. Once that question is decided the next step is to discover if the fish are feeding on one of those natural baits. This is a little more difficult to determine but some of the chance can be removed by taking not of the abundance of the various natural foods. Observations on the time and type of day and the time of year will also help, especially where artificial lures are to be used.

The problem of the caster and the fly fisherman is identical to that of the bait fisherman, only more acute. The Waltonian who intends to lure fish into his creel by means of paint and wood or a tuft of feathers must observe the same "Do's" and "Don'ts" as the bait fisherman and then some. His field of choice is virtually unlimited. For every natural fish food, there are numerous artificial duplications.

In the case of the fly fisherman the duplicates used are not those of the caster, of course, but duplications of flies, bugs, moths, small mice and the like. Instead of searching beneath the water for evidence of natural food, he must look above the surface. Once he has discovered what the fish are jumping for and duplicated it artificially he is going to catch fish—probably plenty of them.

There is a saying that "the biggest sucker of all is to be found on the outside of the counter". Without casting disparaging glances in any direction, this is true. All of us have been lured into purchasing an artificial bait so grotesque in appearance that it would frighten even a shark.

In order to stay in business it is necessary for bait companies to continually present new items to the fishing public. Sometimes

these articles are fantastic in appearance as well as in action. The company's position is perhaps qualified, and the guilt for the acquisition of such monstrosities is passed on to the purchasing public.

After a decision to secure new tackle is reached we traipse off to our favorite sporting goods store or sit down and write our favorite company for a catalog. Eventually something strikes the eye. It may look like a cross between a flea bitten dog and a Zulu chieftain, possessing spangles, trailers and a galaxy of hooks, but we eye it, buy it, try it,—and cuss. It fouls in the cast and only works part time; it lands with a splash and a clatter on the water; and ninety-times out of a hundred will catch no fish.

Over a series of fishing trips all artificial bait fishermen will be further ahead if they use close duplicates of natural food. It is admitted, however, that this is only a generalization. It is granted that a spinner looks like nothing natural, but, then, a spinner is not used as a bait; it is used as an attraction. The fish strikes at the end of the spinner, or the hooks, not at the blade.

It must also be admitted that there are other exceptions to this generalization. Not long ago I purchased a new plug from one of the leading bait companies. Roughly speaking, it possesses the action of a motor boat and looks like something one might see during a seizure of the D. T.'s.

Strangely, though, it was effective, but not in the manner for which it was intended. It is a surface plug, making it more suited for bass than for pickerel or pike as both of the latter are reluctant to thrust their heads above water. However, so far, no bass have fallen for it while pickerel have been wild about it.

Early one morning last fall I gave it an initial try on Blanding Lake in the northeastern part of the State. Paraphrasing Believe-it-or-not Ripley, I had three pickerel strikes on the first cast. Each strike was short though definite and each pickerel left the water by at least eighteen inches. The second cast scared me out of my wits for the pickerel lunged from beneath the boat as I was lifting the lure from the water. There was a sudden flash of silvery green from directly beneath me, a terrific thrashing of water as the pickerel connected with the monstrosity, and the skirl of my reel.

Fourteen pickerel strikes were chalked up to the demizon that morning. Many were short but I caught my limit of really nice ones. That trip was also productive of something else besides fish. My companion taught me that if ever fish are striking short on any lure, it can be remedied by attaching a small piece of pork rind to the tail end.

Similar antics, to a lesser degree, were experienced with that plug on other lakes before the season closed. Whether or not it will continue to be a go-getter remains to be seen. If not, it will probably lie in my tackle box, as have other plugs designed to catch the fisherman rather than the fish, fouling other tackle and sticking my fingers until, disgusted, I'll hide it some place where my wife can get her fingers in it during house cleaning.

The company from which I purchased the plug can cast my words into my teeth and say, "You gave the pickerel exactly what they wanted"—which is probably true. Many fish have been caught on live baits not natural to a lake or stream and on artificial baits not representing anything in particular. That, I believe, is where the element of chance plays its greatest role.

The choice of a reasonable fac-simile adds another problem for the artificial bait user. Nymphs are a natural food for trout, especially in the early spring. The success that a trout fisherman will have in using an imitation depends largely upon the type of water in which he is fishing, the day, and his skill in handling his equipment. From his selection of artificial nymphs, assuming that live ones are natural to the stream, he must choose one which looks most like the real thing under existing conditions. Murky water calls for the use of one kind while clear water calls for another. A cloudy day demands still another specimen while clear days call for a fourth.

The same reasoning can be applied to the caster. It will generally be a waste of time to use a frog type of plug if frogs are not a natural food. The use of a surface plug on a cloudy day is likewise a dissipation of effort. The angler must observe these conditions and act accordingly. Herein lies his skill.

A large supply of tackle is excess baggage. I usually carry only four or five lures in a tobacco pouch unless I am going on an extensive trip. Depending upon the type of day and the time of year, I select never more than six lures from my tackle box and sometimes not over two or three. I have had the greatest amount of success with Colorado Spinners,, pickerel spoons, june bug spinners with different kinds of flies, feathered type plugs, and red-headed plugs for night fishing. Sometimes I use a wooden or composition plug, especially if I want a floating lure. However, my success with them has never been great.

The day has much to do with the type of lure to be used; gaudy ones or silver spinners for overcast weather and the more somber hues and gold-plated spinners for the bright days. Smaller lures are usually better for early season fishing while the larger and more gaudy ones are best for fall.

It must be remembered, though, that there are many exceptions to these generalizations. Arguments can be presented showing I am wrong in many of my conclusions, and for that matter, I can even argue with myself on them. General conditions and locality sometimes will make a world of difference. I am only presenting a case for consistent lakes, not individual cases where some freak has surpassed all exceptations.

WRONG DIAGNOSIS

Doctor (to his daughter): "Did you tell the young man that I think he's no good?"

Daughter: "Yes, Dad, but that didn't faze him. He said it wasn't the first wrong diagnosis you made."

"Far be it from me to recommend the dangling of one's toes in the water, especially in June, just to make the bass angry."

"CHAIN LIGHTNIN'"

Wherein Something of the Life Story of a Chain Pickerel is Discussed

By ALEX P. SWEIGART

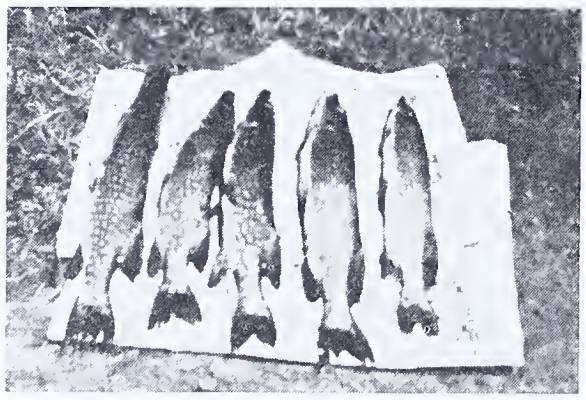
TO the red man who had followed the course of this eastern stream in those days when the eastern mountain ranges formed the frontiers of the colonies, he was known as "shadow fish", but old Sam, who had tangled with him one memorable day the year before, had a definitely better descriptive name for *Esox reticulatus*, the eastern chain pickerel. He called him "chain lightnin'".

Lurking in the sunken branches of a giant buttonwood, Esox symbolized nature's perfecton in stream-lining and protective coloration. Six months after the buttonwood had toppled, with rending crash before the onslaught of a mighty wind into the creek, the big pickerel had established his lair in the tangle of its branches. It was an ideal vantage point, every factor considered, for Esox. In the shadowy recesses of the dead tree, he could wait his prey—minnow, sunfish, small sucker or virtually any other species of fish life present in the creek. His strike came virtually with the swiftness of a shadow, the lithe form darting almost with the speed of an arrow at the prey, then poising motionless for perhaps a minute with the victim between vicious fang-armed jaws prior to turning and swallowing it head-first.

Ideal though the lair happened to be as a place of concealment, it served another very definite purpose in the life of Esox, as three jagged hook marks in his duckbill-shaped jaws indicated. When by chance he struck at the lure of a fisherman, his six pound weight enabled him in the first rush after the barb had been set to dart into the tangle of sunken branches. Once in this ideal refuge, he had invariably been able to tear loose.

But on this October morning, when mist was rising from the water and frost had coated the brush along the shoreline, the refuge of Esox was destined to fail him. For three years, his great size and canny habits had been a source of conversation not only with old Sam and other natives but with fishermen who came to fish the stream from points 5 miles distant. On one point, they were agreed. For anyone fortunate enough to hook the big pickerel, the only possible way in which he might be taken was to stop him on the first rush for his lair.

That thought was uppermost in the mind of the plug caster who chanced to find Esox in a striking mood on this October morning. As the greenish swirl that was Esox connected with the wobbling plug near the buttonwood, he put the 12 pound test line and whippy casting rod to a supreme test that barely stopped the giant pickerel on the edge of the sunken branches. Momentarily balked, old Sam's "chain lightnin'" swiftly turned upstream, the speed of his first frantic run causing the line that had come perilously close to breaking to slice through the water in a graceful arc. One maddened leap, that prompted the plugger to think momentarily of a boat oar flashing

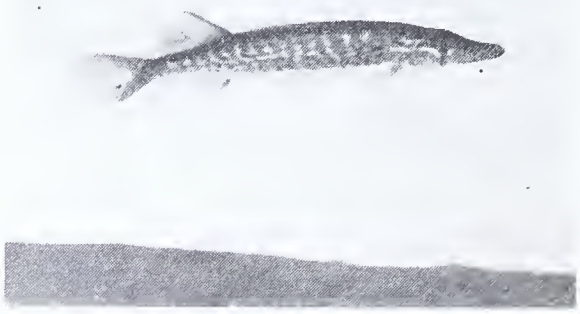


A typical catch of pond pickerel scored in northeastern Pennsylvania.

from the surface, did the big pickerel make, then settled to a steady boring type of battle in sharp contrast to the maddened lunges when hooked of his rival for the live forage of the creek, the smallmouth bass. But the belly set of treble hooks on the plug held firm and fifteen minutes later the big pickerel was lifted from the water as the fisherman secured a firm grip beneath the gills.

The life story of Esox, the chain pickerel, was studded with a record of voracity, destruction and wanton cruelty unmatched by any species of fish life in the inland waters. Of our prominent protected warm water game fishes as we know them today, smallmouth and largemouth bass, wall-eyed pike and pickerel, he alone was native to eastern Pennsylvania streams and lakes, the others having been introduced by man. Of course, there was an exception to this rule in his giant cousin, the Chautauqua muskellunge, but the range of this fish is limited to a few lakes and streams in northwest Pennsylvania.

There is glamour aplenty in the history of the chain pickerel in the Keystone State. The red hunter, stealthily making his way along stream courses or the shorelines of pond and lake saw the dark slender shape of Esox dart like a wraith from weed-grown coves; the first settlers who courageously ventured beyond the mountain barriers to establish homes in Penn's Woods, were well acquainted with his habits. Swift and voracious, he had endured in waters to which he was ideally adapted despite the incursions of an ever-increasing number of introduced smallmouth bass and wall-eyed pike. And surprisingly perhaps, in some waters his species had held its own.



During the early stages of growth, the pickerel was characterized by lithe slenderness and a prominent head.

It was in early spring, just about the first of April ten years before, that Esox the pickerel had come into being. The great sucker run had started up one of the tributaries to the stream, hundreds of these bottom feeders, some exceeding 20 inches in length, milling about during the night as they struggled over shallow riffles. Over the same course, the parents of Esox had made their way, with apparent ease and little if any flurry moving to the spawning ground in a shallow pool in the upper reaches of the warm water feeder.

Arrived at the spawning site, the female deposited her eggs without bothering to conceal them from natural enemies (there were few in the brook) and the eggs were fertilized by the male. Both fish then returned to the main stream. Taking the size of the spawning pickerel into consideration, there were not many eggs, only about 1500 of them. Nature compensated for this apparent scarcity of spawn by offering few obstacles to the hatching and growth of the baby pickerel.

Not all of the pickerel in other bodies of water, such as lakes and ponds, ascended tributary waters to spawn, however. Sometimes in spring fed glacial lakes of northeastern Pennsylvania, the heart of the pickerel range in the Keystone State, the parent fish moved into shallow weed grown bays to perpetuate their kind. There the young found abundant protection and later preyed upon the myriads of baby yellow perch that were slower in growth. Later, in these ponds and lakes, native golden shiners were to furnish abundant forage.

When Esox emerged from the egg, there was attached to him a prominent yolk sac. From this yolk on the underpart of his body, just back of the head, he derived nourishment for about two weeks. Then tiny crustacea and other minute forms of aquatic life provided him with forage until he attained a length of possibly an inch and a half. During the early stages of his growth he was exceedingly slender and graceful, head rather prominent and a distinct vertical bar effect present on his sides. Of the fresh water game fishes, this pickerel was perhaps most delicate. The slightest injury might have resulted fatally and very often did in the instance of others in the brood. Perhaps there was in the great plan of nature some consideration of their fragility, hence the efforts of the parent fish to reach secluded waters where enemies were few.

The growth of Esox during the first year of his life, in fact during the first five years, was in length rather than girth. An abund-

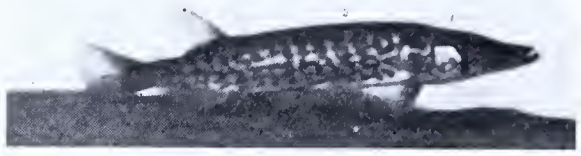
ance of young dace, tiny silver shiners and the young of the run chubs offered ideal forage possibilities in the brook. Even during the winter of his first year of life, when ice had formed over the run, he and others of the brood were active. Of course, in the low temperature water, they did not feed extensively but their habit of remaining active and alert during the winter months was in direct contrast to that of the introduced bass which entered a period of dormancy usually during November.

By the second year of his life, Esox had attained a length of slightly better than seven inches. His cheeks and opercles, or gill covers, were entirely scaley, covered with a fine mesh of scales. There was a prominent black spot, dropping downward below each eye. On the sides was to be observed a golden lustre, marked with dark lines and streaks. These horizontal lines were joined together in a manner that formed a reticulated or chain-like effect, hence the name "chain pickerel". The fins were plain in color and of prominent size. Above the anal opening or vent was the dorsal fin, situated well back and almost directly over the anal fin. All of the fins were soft rayed in contrast with the spiny rayed fins of the bass. His long slender jaws, armed with sharp piercing teeth of varying sizes, equalled half the length of the head.

When he dropped down to the main creek from which his parents had come on the spawning run, Esox found an abundance of food in the form of forage fishes which he devoured with amazing voracity. Apparently the hunger and lust to kill of this growing chain pickerel was unequalled by any other fish in the water world. By the sixth year of his life he had attained a length of 23 inches and had also started to develop heavy girth typical of the pickerel in this stream. His kind were longer-lived than most of the other game fishes of the inland waters and have been aptly described by Jordan and Evermann as "mere machines for the assimilation of other organisms". He was ideally equipped, in build, jaw structure and fangs turning inward, for the taking of other fish, most of his food coming under that classification. Furthermore, he was a confirmed canibal, striking without hesitation at another smaller member of his own species and devouring it when opportunity was presented.

During the heavy feeding months from spring until late autumn there was only one temporary truce in his voracity. That came during the so-called "dog days" of August. Then his needle-sharp fangs became quite loose, soreness came to his jaws and he fed sparingly. This nature-imposed fast over, Esox apparently made up for lost time in destruction and the autumn months found him killing with almost insatiable lust. Only one requisite seemed necessary to bring a strike from the big pickerel and that was movement. Live, moving food formed the basis of his diet. On several occasions in his later years he managed to pull ducklings beneath the surface of the water, drowned them and dined on waterfowl.

His range in the stream was not extensive. There was an abundance of food on the flat and the sunken tree was by all odds favored as a lurking place. Occasionally, however, he cruised to other small bays and weed grown shallows teeming with silver shiners. In night



From the chain-like markings on its sides, the pickerel is believed to have derived the name "eastern chain pickerel".

feeding, this tendency to move about was particularly in evidence. Generally, in taking prey, however, Esox was the lurking type of killer, waiting until some unsuspecting fish swam to within range of his hiding place and then striking with glinting swiftness. There were times too, when, literally gorged with food, he struck and killed apparently for the mere love of slaughter. Bait-fish used by fishermen were often grasped between those duckbill shaped jaws, in a sidewise position, held until the angler struck and then, after a few powerful tugs against the line, released. Once struck by the big pickerel, a dead or seriously injured minnow or stone catfish was almost certain to be the fisherman's reward.

A characteristic perhaps responsible for more escapes by Esox from fishermen than any other was the thin structure of the mandibles or jaws. The jaw tissues tore easily after the hook had been set in thinner sections and as the big fish twisted about in its efforts to break away, the hook barb was frequently dislodged.

The passing of Esox was to prove, in a way, of direct benefit to the stream section in which he lived. To satisfy his voracious appetite, the toll taken in the creek flat not only from forage fishes but food fish and game fish as well was a constant drain. Typical of the family he represented, the big pickerel was one of the outstanding predators on fish life in the inland waters. From the angler's viewpoint, however, there is certainly added suspense and thrill in fishing water known to be the haunt of a giant game fish.

In discussing the stream pickerel, one fact should not be omitted, namely its unpredictable feeding splurges and periods of activity. Simultaneously, it would seem, big pickerel in central Pennsylvania streams would enter into one of these feeding splurges. Then, for perhaps a period of one week or ten days, feeding activity on the part of the big fish would be nil. Plenty of smaller pickerel, 14 to 16 inch fish, could be taken, but the big fellows displayed an amazing lack of interest in all and sundry lures. There seems to be something almost snake-like in this tendency of the fish, since the habit of the watersnake, for example, to gorge itself on food and then go into a stage of inactivity and stupor for considerable periods of time is well known. It has also been observed that when good sized pickerel may be seen moving about in water they inhabit, the time is ripe to expect strikes aplenty.

Three methods today are popular in taking this fish. First is fishing with live bait, minnow, stone catfish or other small forage fish. The bait is either hooked through both lips or through the back, care being taken in the latter method to insert the hook so that the spine of the bait is not injured. Some old pickerel fishermen resort to this system, as it gives them a better opportunity to hook the pickerel when the fish takes the bait crosswise between its jaws. Trolling with dead minnow or other bait fish behind a swivel, with double hook inserted in such a way that the lure has a slight twist and spins when it is drawn through the water, is also a standby method for old timers.

Pickerel are also to be taken on the fly rod, usually by resorting to fly or streamer fly and spinner. This second method is becoming increasingly popular in central county waters.

Finally, because its use permits the fisherman to cover more water with ease and accuracy in his casts, the casting rod has rapidly come to the fore as one of the deadliest devices to be used in pickerel fishing. If this fish is in a striking mood at all, a neatly cast plug or spoon rates as an excellent bet for its taking. Offhand, we would rate certain wobbling spoons, copper or enamelled fish scale finish, high in their pickerel-taking qualties. Apparently, however, in some waters small plugs, either of the wobbling or straight running type, are equally effective. In fishing the spoons a snap swivel is essential as the twisting action of

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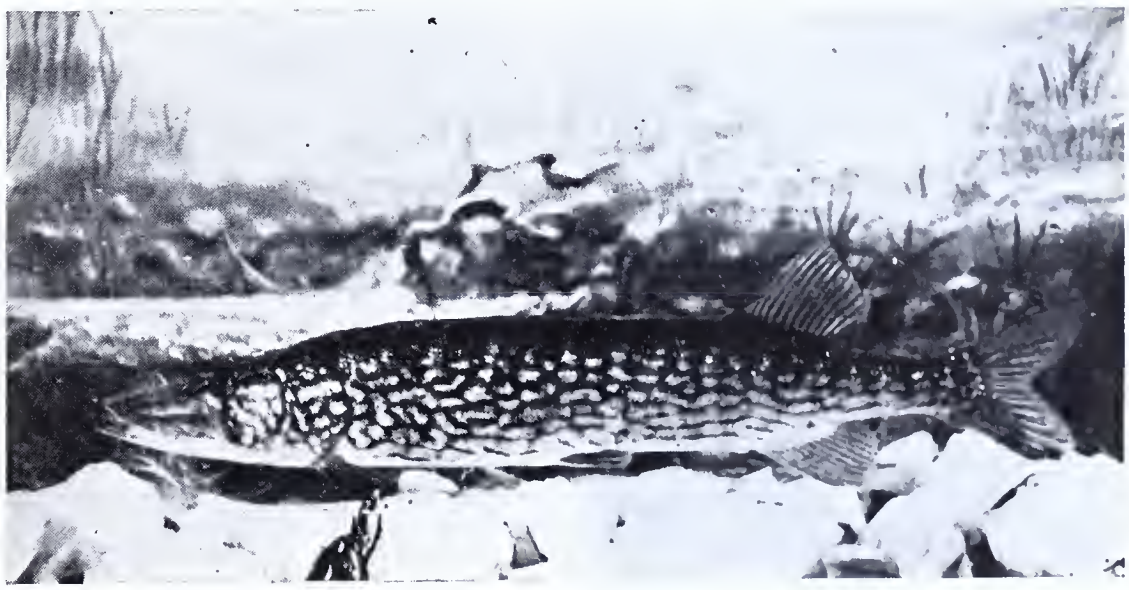
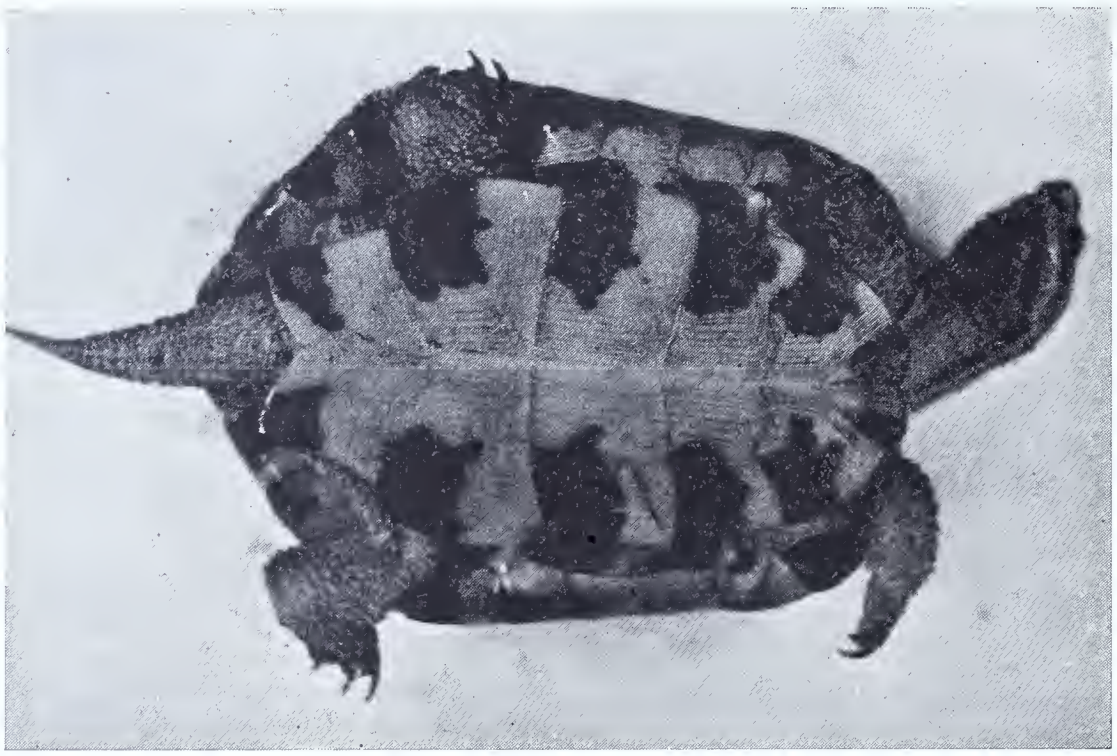


Nature's perfection in stream-lining was typified in the big pickerel.

THE WOOD TURTLE

By PAUL L. SWANSON



ONE of the most interesting of the thirteen different kinds of turtles native to Pennsylvania is the Wood Turtle. In common with most reptiles, it has a number of common names. Since it is practically impossible to standardize one name throughout the range of an animal, and equally impossible to expect the average person to become familiar with the technical name, the practical thing to do is to list all those by which it is known. While one might gather a little vindictive pleasure out of thus putting a predatory species on a level with the criminal of a Post Office "Wanted" notice, one who appreciates a fine creature like *Clemmys insculpta* (LeConte) dislikes having to do so with the Wood Turtle.

The terms "terrapin", "turtle", and "tortoise" themselves are confusing. "Terrapin" is usually applied to hard-shelled edible species from fresh or brackish water. "Turtle" is a broad term to include all of the Order Testudinata, and also a more restricted one designating the aquatic species of the order. "Tortoise" is generally applied to the land species only, although at one time it served to distinguish the land and fresh water species from the marine species which were called turtles.

These loose terms are not entirely satisfactory in placing the "turtle" under discussion. It is terrestrial during most of the season, but one hesitates to call it a tortoise as it is aquatic in the spring, and it is not related to most of the bona-fide tortoises. With this in mind you may call it whichever you wish and have some basis for proving you are not a liar, even though you are a fisherman.

The Red-legged Turtle is one of its common names, which being somewhat descriptive, is good. The Sculptured Turtle is another, originating from the chiseled aspect of the upper shell. The Wood Turtle describes the animals habitat, and is preferable to me, perhaps because I am a forester.

The range of the species is eastern North America, from Nova Scotia to Virginia, west to Michigan, Wisconsin and Iowa. It has not been found in Indiana and Illinois.

It is not hard to identify, as no other local turtle looks very much like it. The carapace (or upper shell) is very rough in appearance due to the series of concentric grooves on each plate. The ground color is dark brown, relieved by numerous yellow lines. The plastron (or bottom shell) has a deep notch at the rear. Each plate is yellow or orange in color with a large patch of black.

When held upside down, the legs and fleshy parts are usually orange or reddish. The legs are covered with rough scales. Large specimens have a shell that measures eight inches in length, although the average is somewhat smaller. We have a very large one at present that measures eight and one-fourth inches.

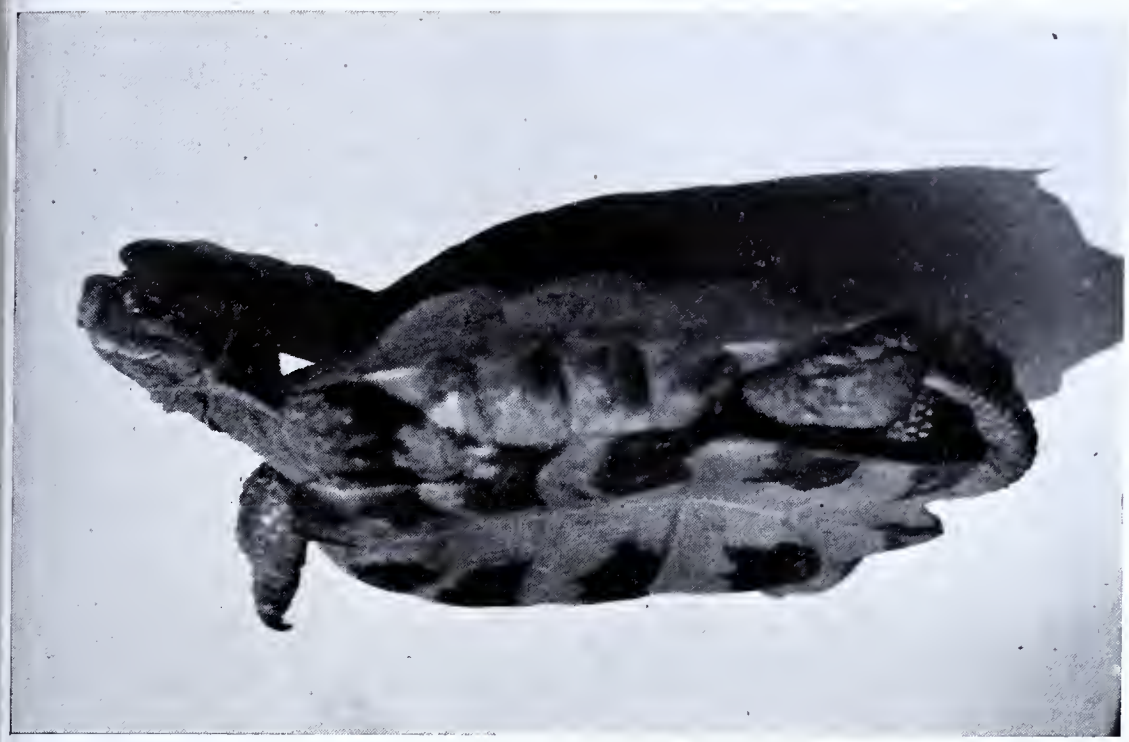
In the spring the Wood Turtle can sometimes be found in the water. I have often seen them in clear streams, and on one occasion observed two that were mating under water in a trout stream. In the summer they are to be found roaming in the woods.

It is omnivorous, its diet including among other things, leaves of various plants, berries, mushrooms, insects, milipedes, small animals and fish. In captivity they are very fond of raw meat, fish, corn, boiled potatoes and bread.

A short time ago I offered a mushroom to an eight inch Wood Turtle. It nosed the fungus a little, and then became interested in an adjacent finger. I held my hand still as I had often wondered how much damage their sharp jaws could inflict. I have heard arguments relative to the snapping turtle both pro and con on the possible amputation of a digit. This Wood Turtle, I am inclined to believe, with no thought of animosity grasped my finger as a potential morsel. Although it pinched severely, it did not break the skin. I subsequently tried the experiment with a tough frankfurter. Although the offering was probably more tender than my finger, the turtle made three or four nibbles at it before it succeeded in tearing off a mouthful.

I am still dubious about the snapper's ability, but do not care to offer a finger to the experiment, as I have use for all of them in playing the piano as a means of clearing the house of guests when I want to be alone. I will be glad to collaborate with anyone on such an experiment if they furnish the finger. I have the snappers.

The Wood Turtle lays its thin-shelled, ellipsoidal eggs late in June. They are deposited in a depression in the ground and covered with dirt or humus and left to hatch



by the heat of the sun. It is said that during the nesting season both sexes of this species have been observed to utter a subdued whistle. I have never observed them in the act of nesting, but have noticed that this species, as well as the box tortoise, gives occasional wheezes and other inadvertent respiratory sounds. They also make odd noises when partaking of food.

While the Wood Turtle can not be said to be rare, it is not plentiful like the box tortoise in some parts of its range. In the northern part of Pennsylvania, it is probably more commonly found than the box tortoise, the latter being much more common in the southern part of the state.

Although it is considered edible by some, I would heartily recommend leaving it unmolested. It is not plentiful enough to be hunted for food, and it is much more interesting and entertaining to observe in the woods than it is in a soup bowl.

As a pet, the Wood Turtle is one of the best of the reptiles. Requirements for keeping it in good health are simple. A small enclosure containing a pan of water is about all that is necessary. It soon becomes tame enough to take food from the fingers. In the winter time it can be kept in a box in a cool cellar, and if it is cold enough without freezing, will require no more attention until the following spring.

Having little doubt that the Wood Turtle is the speediest of all our native turtles, I determined to prove the supposition to my own satisfaction. This was done by laying circles of twine on the lawn and measuring the radii. The fastest individuals of several species were than placed one at a time in the center of the circle. For those that travelled in a straight line to one of the measured circumferences, the time taken to traverse the distance was noted. The contention on the speed of the Wood Turtle was thereby substantiated.

A limited number of experiments were made so far, and in the cases of the Spotted and Snapping Turtles, only one adult of each was available for the experiment at the time. With the others, the fastest individuals were used. In terms of miles per hour, the results are as follows: Wood Turtle, 0.68; Painted Turtle, 0.25; Spotted Turtle, 0.17; Box Turtle, 0.21; Snapping Turtle, 0.12. These figures represent the speed for only distances less than 25 feet, and are "cruising" speeds. Under certain conditions any of them could travel faster if necessity warranted it. When travelling any appreciable distance, turtles make frequent stops to reconnoitre, rest or eat. The acquatic species travel more rapidly in water than they do on land. most of them having webbed feet for swimming.

ANOTHER REASON TO SAVE FORAGE

Wilkes-Barre anglers, as well as others of the Izaak Walton fraternity, who are bothered so much by the mosquito in their piscatorial pursuits, unwittingly help increase the number of the stinging pests by using the dragon-fly nymphs or "perch bug" for bait.

This interesting fact is set forth in a report on the extermination of the mosquito prepared for the Junior Chamber of Commerce by John Kovalich and Stanley Mesavage in their biological investigation prepared for the campaign now under way to rid Wyoming Valley of the mosquito.

Here is what these two learned young men, in their report, have to say of the dragon-fly which is a foe of the mosquito. "The dragon-fly nymph feeds on the immature stages of the mosquito and the adult feeds on the adult stage of the mosquito. Here we have a two-way check on mosquito propagation, each common to the respective media in metamorphosis of the pest. This probably will be the highlight in the investigation. There is one very important hinderance. Fishermen search the countryside to obtain the dragon-fly nymph as bait. Pools and ponds, temporary and permanent, are dredged for the "bug" commonly known as "perch bug" which results in a higher percentage of mosquitoes being abel to complete the life cycle. One adult dragon-fly accounts for as many as forty adult mosquitoes per day. This is not an average but for numerical reasoning. if 1,000 dragon-fly nymphs are prevented from reaching the adult stage, 40,000 mosquitoes stand a good chance, barring other checks to carry on propagation. As each adult female lays from 200 to 400 eggs, think of the countless numbers that are increasing rapidly from day to day.

Therefore we can say that the fishermen who are bothered so much by the mosquito, unwittingly help increase the number by using dragon-fly nymphs for bait. An action should be taken against this and if this measure proves successful, it will go a long way toward eliminating the problem.

The report goes on to tell that there are few disease bearing species of mosquitoes in this region due to climate conditions. The metamorphosis of the stinging insect can be completed in about two weeks, says the report, and local residents are reminded that rain barrels, garbage cans or any container that holds water and that is left outdoors during the summer for two weeks or more may become a breeding place. A likely breeding place is the community dump which offers the rain-filled containers to the mosquito as a temporary home. "Such media should be overturned if they contain water" is the advice. "Small temporary pools near the home should be destroyed. With the destruction of the breeding places, the number of mosquitoes in the locality will be deminished."

POND OWNERS DONATE FISH FOR STOCKING

Recently R. A. Harris, Plymouth, prominent druggist, who owns a pond outside of Sweet Valley in Ross township, decided to draw the water from his pond for the purpose of improving it and finding that it was inhabited by a large number of fish decided to aid the public in stocking any improving fishing in local waters by donating his supply to the Fish Commission.

Under the supervision of Fish Warden Russell Womelsdorf, an efficient job was done in removing approximately 250,000 pickerel, catfish, yellow perch, sunfish and shiners. These were distributed in Harvey's Lake, Sylvan Lake and Lake Silkworth, waters which are all open for public fishing. A tank truck was provided by the Fish Commission and the job was completed through the co-operation of several members of Wilkes-Barre Camp of United Sportsmen and a large group of members of the Sweet Valley Fish and Game Protective Association.

A similar donation was made recently by Osborne Culver, who also owns a pond near Sweet Valley and who decided to give the public the benefit of fish which inhabited his pond when he decided to drain it. The same co-operation was received from members of the Sweet Valley Fish and Game Protective Association as in the above case and under the supervision of Fish Warden Russell Womelsdorf approximately 50,000 fish were successfully removed and transferred to Sylvan Lake, North Lake, Grassy Pond and Lake Silkworth.

"Just as the bridegroom and the widow-bride began the march up the aisle, every light in the church went out. But they kept on going. She knew the way."

OLD ANGLER LAYS DOWN HIS PEN

The Old Angler has laid down his pen and has passed on to more promising fishing grounds, but his articles on the piscatorial art, with an occasional foray into the field of hunting, will long be recalled with a feeling of nostalgia by sportsmen who looked forward to his weekly contributions to the sporting pages of The Tribune.

Many who were familiar with the pseudonym, The Old Angler, were unacquainted with the identity of the writer. He was Laurence B. (Larry) Ashcom, for many years a reporter and city editor of this newspaper. His articles were widely read and frequently quoted by publications devoted to hunting and fishing.

The Old Angler was always on the side of clean sportsmanship. Nothing disturbed him so much as a lack of that quality in those who fished the streams or stalked game in the woods he loved. He was a vigorous exponent of rigid regulation of these favorite sports, but was outspoken in opposition to anything smacking of unfair interference or political meddling with laws designed to protect the sport for the enjoyment of real sportsmen.

Larry Ashcombe

The Old Angler has laid aside his pen and will write no more. He will be missed by many hundreds of friends, but by none will his passing be more sincerely regretted than by those who were associated with him daily in the publication of The Tribune.

Editorial—Johnstown Tribune.

UNION FIELD DAY ATTRACTS 2000

Approximately 2000 people attended the first annual picnic and field day held by the Union County Sportsmen's Association at Lincoln Park, Laurelton. Ideal weather, spirited music by the Penn's Valley Jr. Band, the faithful and hard work of every member of the various committees made the day an outstanding event among the sportsmen of the county.

Unusual interest was manifest in the various contests and exhibits and the excellent amateur movies which were shown in the evening. The movies, taken by Dr. Sempler, Oscar Heckman, Roy Stahl and R. S. Diehl, were scenes of wildlife, fishing and hunting.

Exhibits and exhibitors were as follows: birch bark canoe, Dr. Sempley; feeders and flushing bars, Harold Leiser; fly exhibit, Charles Swank; gunsmith, restocking and old guns, Walter F. Shively; Remington Arms Co., Paul Hoffman; traps, skin stretchers, duck decoys, Harry VanCleve; first aid, Lewisburg Boy Scouts, in charge of Dr. Daugherty; forestry display, District Forester Winters, Lieut. Seger and Veterans CCC; Forestry Planting, Clarence Walker; Sharpshooter, H. M. Wolfe; Fly display, Samuel Miller; fishing display, Dept. of Fisheries; dog food, Campbell's Mill; fly display, Reno Maurer.

Dogs—English Setters, Wm. Woodson, mother, 6 pups and male dog; Clair Groover, mother and 8 pups; Earl Zimmerman, male dog; M. C. Arnold, mother and 8 pups and male dog; Harry Fritzen, male dog; Wm. Shaffer, male dog; Beagles—Percy Weidensaul, mother and 3 pups; ames Libby, male dog; W. K. Luken, male dog; John Decker, male and female; Coon Dog—Albert Goodlander, 2 males; Cocker Spaniels—Frank Snyder, male; Mrs. D. P. Paige, 2 dogs, 3 pups; Pointer—Paul Pardo, male; Boston Bulls—Mrs. D. P. Poige; Scotties— Mrs. D. P. Paige, 2 pups; Shepherd—Albert Goodlander.

Prize winners in the various events were as follows:

Trap Shooting: Class A—Wm. H. Snyder, Winfield, 48-50; Class B— George Grove, Lewisburg, 39-50; Class C—Melvin Stamm, Millmont R.D., 29-50.

William Doebler, Mifflinburg, walked away with the boys prize, breaking 23 pigeons out of 25. Paul Hoffman, of Remington Arms Co., gave the boys instructions in trap shooting.

Plug Casting—1st prize, Hayes Person; 2nd, William Duck; 3rd, Edwin Asher.

Fly Casting—Distance, David Johnson, 69 feet; Accuracy—George Dieffenderfer and David Johnson, tied with a score of 15 points.

Gopher shoot—Three ties for first, score 13-15, H. E. Stover, Wm. Molke, Dewey Fessler.

Two ties for second, score 11-15; John R. Ross, Arthur Minnier.

Third—Maynard Reitz, 10-15.

Merchandise prizes were given to the above winners, some of which were donated by Harold Leiser, Margaret Snyder and Roy Stahl.

The Remington Pump Gun was won by J. M. Gallagher, the fly rod went to Weber Gerhart. Other winners were Clyde Showers, Dr. Sampler, Oscar Heckman, Samuel Miller, H. J. Fritzen and H. W. Gill.

Laurelton defeated Sunbury in a ball game by the score of 11-4.

Approximately thirty new names were added to the association's roster, bringing the total membership above the 300 mark.

MOVE TO RESTORE BREAST OF DAM

Royersford Hunting and Fishing Association formulated plans with Spring City Fish and Game Association in a move to rebuild a dam breast in the old Mill dam in Spring City, which had broken. The action was taken to afford better fishing.

Enos Krause, a member of the Spring City group, attended a monthly session of the 'Ford sportsmen in the interests of his club. President Irvin Clemens appointed a committee to meet Thursday night to take action. Committee appointed was W. I. Fox, Maurice Clemens, Linwood Gerges and Norman Kolp.

Delegates of the 'Ford club were instructed to attend a meeting of Montgomery County Federation of Sportsmen's Clubs Monday night at Narberth.

All sportsmen were invited to enter the KYW fishing contest, which will close October 31. It was announced no entry blanks would be needed and no fees would be charged for the contest, for salt or fresh water fish.

Merrill Flemming, chairman of a committee appointed for the annual clam bake by Montgomery County Federation, announced the fete would be staged in Montgomery County Park, Green Lane, August 17.

COMMERCIAL FISHERMEN ARE FRIENDLY TO ANGLERS

At a meeting of commercial fishermen and fish marketers of the Great Lakes, held in Chicago, recently, a friendly attitude towards sports anglers was reflected in a resolution which was adopted, as follows:

Whereas, we, the producers and marketers of the food fishes of the Great Lakes recognize a community of interests with the anglers and sportsmen of the Central states region and of the United States and are aware of the extensive efforts being put forth by these individuals and groups to improve the conditions leading toward the goal of more fish and better fishing, now—

Therefore, be it resolved that the anglers and sportsmen be informed of our recognition of their efforts and of our desire to be of assistance in furthering these ends.—Great Lakes Journal.

Question: I recently secured several small plugs that are floaters until the retrieve is started and they wobble under the surface. A friend who has fished this particular type plug says there are variations in maneuvering it that make it more effective. Could you offer any suggestions in this line?—J.S.

Answer: Two methods of fishing this type plug have been found highly effective. The first is by rapid retrieve from the instant it strikes the water. This is accomplished, in the instance of a right hand caster, by a rapid shift of the rod from right to left hand while the plug is close to the surface in its downward arc. By starting the retrieve slowly, the plug is given those first few underwater wobbles that apparently are highly appealing to his highness, the smallmouth bass in rock bottom streams. It will be found that most strikes occur in the first two feet of the retrieve, although we have had bass follow the plug to within ten or twelve feet of the rod tip sometimes even closer before connecting. A second method that has been found highly effective to date this season by Nev Sherlock, whose pet is this type of lure, has been the "pause after cast" system. This seems to work particularly well in weedy stream sections where the largemouth bass occurs. The plan is to place the cast close to shoreline or weed patch, let the lure lie motionless for perhaps twenty seconds, and then start the retrieve, not too rapidly. Both systems have accounted for a number of nice bass to date.

Question: Have taken twenty bass, all smallmouths, on plug to date this season, killing three. Two of these bass were females, one going three pounds and the other two pounds and three quarters. I was very much surprised when I opened them to find eggs in both. The spawn seemed well develpoed. Have always been under the impression that bass are spawned out by July, but the catches in question were made on July 8 and July 10 respectively. Have also heard of other bass being taken that contained eggs. What would account for this?—J.S.

Answer: Your report is typical of a number received to date this season at the *Angler* desk. First of all, we have had an unusually late spring this year, with bass stream temperatures well into July hovering around the 60 degree mark. Alternate spells of hot and cold weather caused considerable fluctuation in temperature, with the possibility that this may have caused the bass to become egg-bound. When the female fish is ready to spawn, a sudden drop in water temperature, if not too severe, may cause the fish to withhold her eggs until warmer water prevails. On the other hand, should this drop be sharp and severe, the ripe female may become egg-bound. It is believed in the instance of the bass, that this egg-bound condition may not too severely effect the fish if she is in good condition, the eggs eventually being absorbed into the system. Very often, however, sterility may result, and should this condition be widespread this year, a drastic effect may be had on wild spawners in our bass waters.

Question: Recently, during the period from July 15 to 22, when the moon was approaching full and full, I had exceptionally poor results in fishing light artificial lures. Have heard that the moon phases have a definite effect on fishing and that seems to have been results so far as I am concerned. During early season when the moon was dark, had fine results. How about this?—M.F.R.

Answer: Plenty of other pluggers who fished during the same period report similar results from their trips in daylight hours. Old time rivermen in the central counties stand firmly by their conviction that when the moon is approaching full and full, fishing is as poor or more poor than it will be during other periods of the month. Their contention is, and apparently this is borne out in fact, that game fish such as the bass, pickerel, and wall-eyed pike feed heavily when the light of the moon silvers the water. This necessarily means less activity during daylight hours, and in the week you mentioned, extreme heat probably didn't help the caues a bit. Stream temperatures during the heat wave rose sharply, and virtually the only action reported from light lure casters on central streams occurred about dusk or slightly thereafter.

'T' other day we hed a rite smart raise in the crick atter a hevy rain an' in haf a hour durned ef the water wusn't red muddy. Joe Simms allowed thet the catfish oughter bite like wolves so we got us sum red worms in a hurry an' heded fer the crick. Gineraly, when the water's amuddyin' rite atter a rain fer mebbe haff a hour, the bullheds takes hold gude, an' atter thet, the stone catties goes ter wurk fer fare on a feller's bate. Well, we gits ter the crick rite smart, ketched a cuppel bullheds an' then the circus starts. Joe he gits a strong bite an' pulls in more'n 2 feet o' the ugliest lookin' critter you ever seed. We call 'em hellbenders herebouts, but I also heered 'em called waterdogs an' salymanders. Sorter look like a big overgrowed lizard without enny eyes. Well sir, we ketched ten o' the criters in erbout a hour's fishin' an' we hed one thet wuz 27 inches long.

I allus was plum curious ter know jest what these hellbenders feed on, so Joe an' me figgered we'd open 'em up. By gosh, when I seed whut wuz in their stummicks, it warn't no surprize ter me thet the bass feed is gittin' so all-fired scairce in the crick. Three o' the critters hed minnies in them, one hed a sucker, an' durned ef seven didn't hev crabs runnin' in size frum eround 2 inches ter 3 inches. Now, then, I reckin we don't hev no better feed fer bass in our crick then crabs, an' jest how much harm these hellbenders is doin' ter this feed a feller kin guess. Cum ter think o' it, it ain't much wonder thet crabs is a pet kind o' feed fer hellbenders. The critters cum out from under rocks at nite or when the water gits muddy atter a hevy rain, jest erbout when the crabs moves erbout too. Crabs ain't too fast in gittin' away an' ef they do go under a rock, them ugly hellbenders kin go rite in ater 'em, corner 'em easy an' taik 'em. Whut's worryin' us is thet the hellbenders is gittin' more plenty in the crick each year.

Now then, they wuzn't ennybody more tickled then me when they put thru the law again giggin' years back. But rite now, I'm asayin' thet giggin' parties, ef they wuz got tergether under a warden, cude do a whale o' a lot o' gude in riddin' the streams o' waterdogs. We ain't got no more tuff figgerin' ter do in bringin' back our bass fishin' then bildin' up the feed supply, an ef we kin kill off sum o' these hellbenders, I'm bettin' we'd see a cumback rite soon in crabs in our cricks, the best feed fer bass we got.

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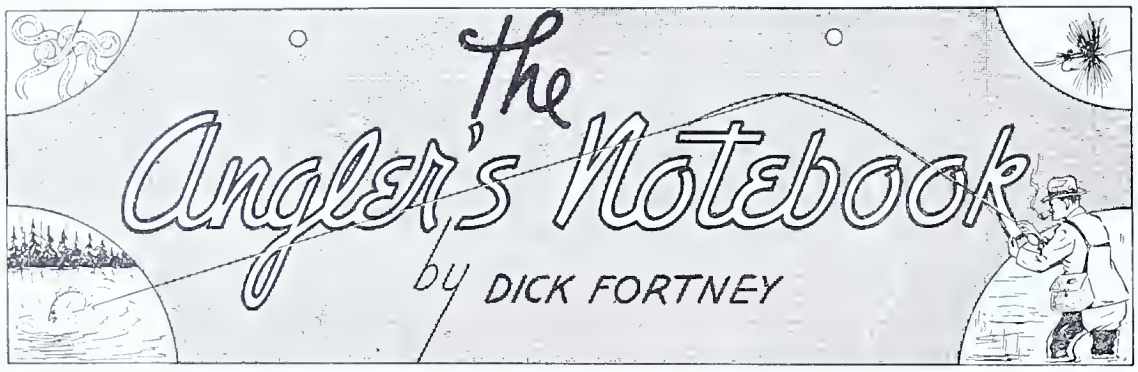


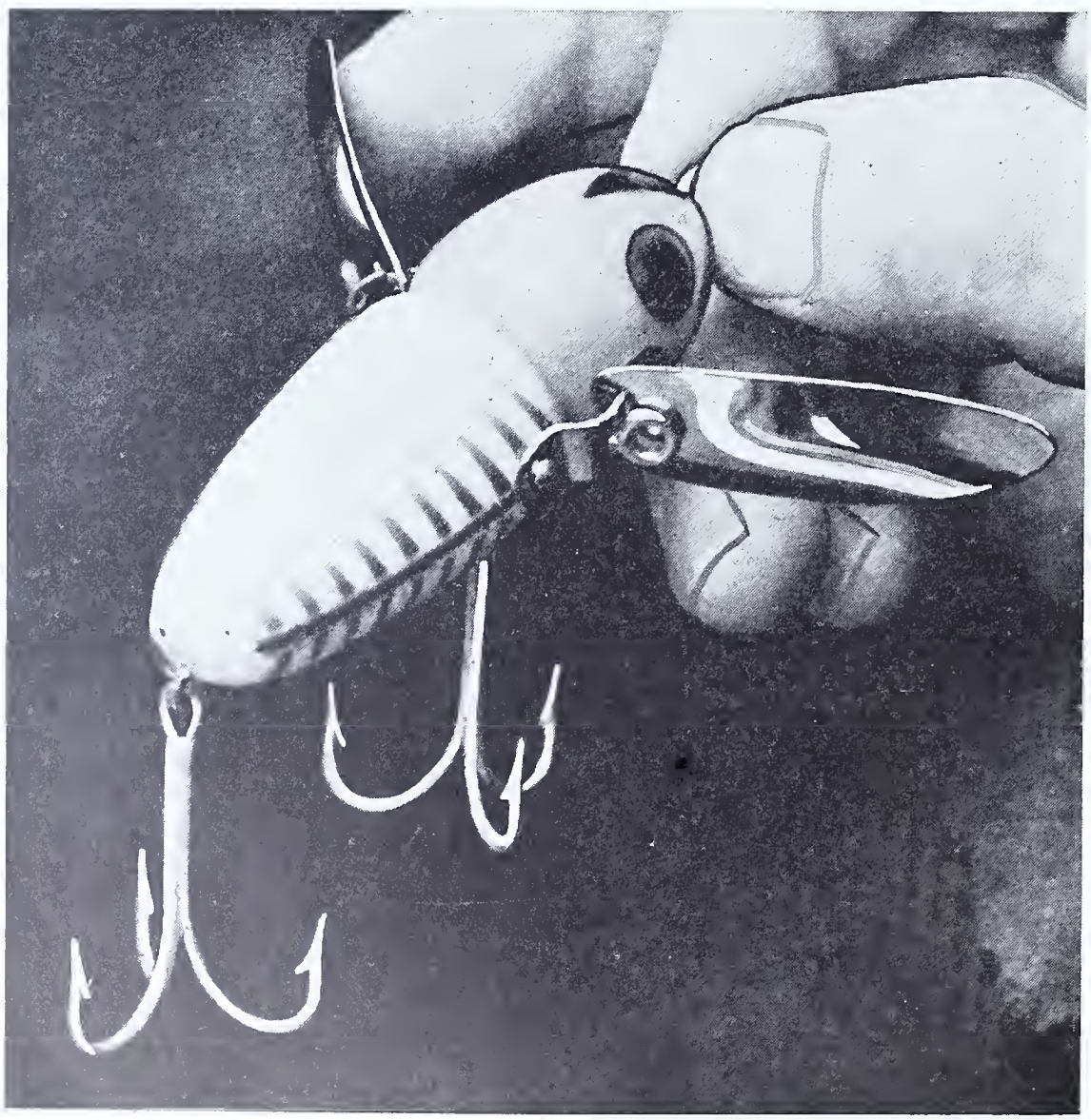
WET flies, the fly and spinner combination, and floating bass bugs are three fine lures for black bass and furnish fine sport for the angler who dislikes bait and plug fishing. The fly and spinner are fished wet; that is, beneath the surface of the water. The bug is retrieved in short jerks on the surface of the water, preferably in the evening. A six-foot leader can be used with all three lures.

A successful "dry fly" method of casting lures or bait with the fly rod: Use a small surface plug or other lure and cast between lily pads and beside windfalls or snags. Do not retrieve the lure for about three seconds; give it a slight jerk, and continue these tactics until the lure has been moved three or four feet. If there is no strike by that time, reel in the lure and make another cast.

Bass can be caught on dark nights by using flies trailed behind a boat which is allowed to drift quietly and slowly. Two or three flies may be used on the same leader for this kind of angling. The flies imitate bugs drifting along with the current.

In river fishing the angler will do well to work carefully the edges of riffles and rapids, the pools at the foot of rapids, along sunken logs and shelving banks, and among submerged tree roots from which the water has washed the earth. Quiet coves where lily pads and rushes grow also are good hiding places for fish.

Drink sparingly of water in strange places. It may cause dysentery or constipation until you become accustomed to it.



Here's the latest in plug lures for bass fishing. The plug is of plastics and is of the float-and-dive type. The manufacturer says the metal wings on the sides create a great commotion in the water that is sure to attract fish.

To catch minnows work up a good lather on the water with a piece of soap. Minnows are attracted by the suds, and a net dragged through the water will trap many of them for use as bait.

The average bait caster will do far better work with less effort and will get greater distance if he does not use too heavy a line. A 15-pound test line is about right for the practical casting of plugs and wobblers. It must be remembered, however, that while a lighter line casts more easily it also wears out more quickly.

In trolling for pickerel remember that it is the flash of the spinner or spoon that attracts the fish. Pike usually will strike at the glitter in the water regardless of the kind of fly that may be used. Nor is the color of the lure very important. Bright, shiny flashing lures are the things that catch pike.

At the end of a hard luck fishing day, if you have been "skunked", place two minnows on a single hook. If black bass don't react to this one, you'll have to call it a day.

Sunfish usually will rise to the fly. The best fishing is had in late afternoon and evening, when a light breeze is blowing. Try for sunnies during the off days of bass fishing, using a light fly rod, a small, single-action reel, and a light enameled silk line, a three-foot, single gut leader, and small trout flies.

Dead minnows may be preserved for bait casting in sweet oil. Place the minnows in a container of the oil and then put the container in a pot of boiling water. Keep it there until the oil reaches the boiling point.

A bait casting reel, if properly handled, does not require cleaning more often than once a month, although it should be oiled frequently and always be given a thorough cleaning if it falls in sand.

The heavy plugs used in casting on large lakes are of little use for black bass fishing on smaller streams. Very small plugs, used with a gut leader, are ideal for stream bass.

In lake fishing for wall-eyed pike a spinner with a gob of worms or a minnow attached is good medicine if trolled deep beside weed beds and rocky ledges.

When you come in from fishing open your tackle box and let it open until the lures are thoroughly dried. This will preserve the lures and also keep the inside of the box from rusting. After use, shake the water from bucktails, bass bugs, and feathered minnows before returning them to the box.

At dusk the imitation mouse, cast along the shore and slowly and steadily retrieved, making a V-shaped wake in the water, will often entice the whopper bass that are edging into the shallows to feed.

Famous trout water, the Left Hand Branch of Youngwoman's Creek in Clinton County, in September last year, the peak of the drought. W. E. Rutherford snapped the photo.

MANAGEMENT OF FARM FISH PONDS

Stocking the New Pond

It is extremely important that new ponds should not be stocked with too many fish. By the end of the first summer, if properly stocked, bream should have reached a size of approximately one-fourth of a pound and bass or crappie a size of about one pound. If too many fish are added it may take as long as five years or more for the fish to reach the above weights.

Considerably better results are secured if several species of fish are placed in the same pond. When a pond is stocked with bream only, as soon as these bream reproduce it becomes so over-crowded that the small fish are unable to grow because of lack of food. If the correct number of bass or crappie are added to the pond containing bream they will feed on the surplus and thus help to prevent overcrowding.

The number of fish to be added depends upon the number of pounds which the pond can support. In general, unfertilized ponds will support from 100 to 200 pounds of fish per acre, while fertilized ponds support from 500 to 600 pounds.

An acre of water, if not fertilized, should be stocked with 400 bream and 50 bass or crappie; if fertilized, it should be stocked with a maximum of 1500 bream and 200 bass or crappie. If it is desired to also add catfish to the pond the most suitable species appears to be the common bullhead catfish. For each 25 catfish added, reduce the number of bream to be added by 100.

The best results have been secured by stocking with fry or fingerling fish as near the same size as possible. Bass, catfish or crappie should be placed in the pond at the same time as the bream. This should be done so that all will have an equal start since these young fish compete with each other for food.

Much poorer results may be expected if the pond is stocked with a few large brood fish as this usually results in overstocking as soon as these fish have spawned. If this has been done it is often better to drain the pond after spawning and remove all except the correct number of small fish.

In addition to the above fish every pond should be stocked with minnows at the rate of at least 100 per acre.

Restocking Old Ponds

After a pond has once been properly stocked with fish, it should not need restocking. Experiments at Auburn have shown that if only **one pair** of bream, bass or crappie are present per acre of water they can produce more small fish than the pond can support.

In older ponds poor fishing is not due to lack of sufficient brood stock, but usually to the presence of considerable numbers of large fish which are too wary to bite and which eat up most of the small fish produced in the pond. When this condition occurs, good fishing can best be regained by draining the pond, removing all the fish and returning just the right numbers of small fish after refilling the pond. The large fish should not be returned to the water.

Fertilizing the Pond

Experiments conducted by the Alabama Agricultural Experiment Station at Auburn have shown that most of the food for fish in a pond is furnished by plants so small that they can be seen only with a microscope. These microscopic plants float throughout the water and if present in sufficient numbers give the water a light green or brown color. They are eaten directly by several species of fish and also furnish the food for insects, tadpoles, crawfish and other small animals upon which the rest of the fish feed. It has been found that the abundance of these microscopic plants can be increased by the use of fertilizers and that when this was done the number of pounds of fish produced per acre of water was greatly increased.

Unfertilized ponds at Auburn produce from 100 to 200 pounds of fish per acre. Properly fertilized ponds have produced as high as 580 pounds of fish per acre. If it is desired to produce more pounds of fish per acre of water, fertilizer should be used.

Amount of Fertilizer Per Acre

The following amounts of fertilizer are added to an acre of water at each application:

40 pounds of Sulphate of Ammonia.
60 pounds Superphosphate (16%).
5 pounds Muriate of Potash.
30 pounds Basic Slag or 15 pounds Ground Limestone.

These materials may be applied separately or mixed just before they are applied. Basic slag cannot be mixed with the other materials and stored for any length of time as it causes loss of the ammonia.

If it is desired to use a commercial mixed fertilizer, instead of the above materials, approximately similar results can be secured by using 100 pounds of 6-8-4 plus 10 pounds nitrate of soda per acre at each application.

Time and Frequency of Application

The first application of fertilizer should be made in the spring as soon as the danger of floods is past (usually April or May). If the pond has not been previously fertilized, two to three applications should then be made at weekly intervals. After this, an application should be made whenever the water becomes clear (approximately every four to six weeks.) The last application should be made in September, the pond thus receiving from 8 to 10 applications per year. The cost per acre per year varies from $10 to $14.

Method of Applying Fertilizer

In small ponds up to several acres in area, the fertilizer is applied by walking along in the edge of the water and broadcasting the fertilizer towards the deeper water. No attempt is made to completely cover the pond. It is applied in the shallow water and wave action gradually spreads it over the entire pond. At the same time care is taken not to apply any of the fertilizer right at the edge of the water as this will encourage the growth of weeds. It is best applied in water from one to five feet in depth.

In large ponds the fertilizer is broadcast from boats over the area where the water is from one to five feet deep.

Weed Control

As was mentioned above, the majority of food in the pond is furnished by microscopic plants which float in the water. It has been found possible to raise as high as 580 pounds of fish per acre in ponds which **do not contain** any of the larger water plants such as water mosses, water lilies and pond weeds. These larger plants are of very little value in ponds and most of them are detrimental. In new ponds they should be pulled out whenever they appear. Most of them are easy to control if not allowed to get thoroughly established. After they are once established it is practically impossible to get rid of them without draining the pond and allowing the bottom to dry out for several weeks or longer.

The above is from a bulletin issued by the Agricultural Experiment Station of the Alabama Polytechnic Institute.

M. J. FUNCHESS,
Director.
H. S. SWINGLE,
Dept. of Zoology and Entomology.
E. V. SMITH,
Dept. of Botany and Plant Pathology.

Even big streams such as Penn's Creek in Centre and Union Counties felt the effects of last year's drought. Bill Rutherford snapped this picture of the stream at Weikert last September.

Charles Stitt of New Castle with the 34 inch, 18 pound muskie he took on plug last year in Conneaut Creek.

WARREN LAKE OPENING DISCUSSED AT MEETING

At the American Legion Hall in Narberth, the Lower Merion Rod and Gun Club was host to the Montgomery County Federation of Sportsmen's Clubs on Monday evening, July 15th, when the Federation held its Third Quarterly Meeting of the current year. There were present 58 delegates and visitors who represented most of the fourteen member clubs.

William Stoneback of Colmar, President of the Federation and President of the Lansdale Sportsmen's Club, presided; while Leroy B. Seasholtz of Gilbertsville, from the Douglass Rod and Gun Club, Secretary of the Federation, acted as Secretary of the meeting.

Russell Krupp of Schwenksville, a member of the Perkiomen Valley Sportsmen's Association and Chairman of the Federation's Game Committee, told those present that Mr. Warfel, Superintendent of the Fisher State Game Farm at Schwenksville, has offered to supervise rearing of the six-weeks-old pheasants and quail which have been given by the Pennsylvania Game Commission to the Federation, to be raised in the Federation pens at the Eastern Penitentiary at Graterford. Inmates of the Penitentiary each year raise pheasants and quail for the Federation to distribute among its member clubs for liberation on territory in Montgomery County where the general public is permitted to hunt. So far, according to the records which have been kept by the inmates who have reared these birds, it costs only 39c per bird to raise them until liberated; while, when liberated, they are worth appuroximately $2.50 per bird, Mr. Krupp summarized. He also pointed out that during 1939 only 18 birds were lost during the rearing of approximately 540 which were liberated throughout Montgomery County last Spring. This was an unusually low rate of mortality, for which those who cared for the birds under the direction of Ira J. Mills, Supervisor of Agricultural Education at the Penitentiary, deserve credit, Mr. Krupp added.

The Fish Protector of Montgomery and Bucks Counties, Harry Z. Cole of Norristown, a member of the Montgomery County Fish, Game and Forestry Association, spoke of recent changes in our fish laws and, in addition, reported that Warren Lake, in the upper end of Bucks County, has just been opened to fishermen. Mr. Cole told the meeting that already several hundreds of fishermen had visited this Lake in one day and had made unusually large catches of bass there. At this point, Howard C. Shallcross of Graterford, who was the first President of the Montgomery County Federation of Sportsmen's Clubs and who is the present President of the Perkiomen Valley Sportsmen's Association, told the delegates that the Pennsylvania Fish Commission is planning to place fish in the waters above or below the dam in the new Montgomery County Park at Green Lane.

In the absence of E. F. Brouse, of Norristown, from the Montgomery County Fish, Game and Forestry Association, there was read a communication from him, stating that the member clubs of the Federation had transplanted during the past months a total of 21,000 young trees which were distributed from the Federation's nursery on the grounds of the Eastern Penitentiary at Graterford.

John Ruth of Kulpsville, a member of the Lansdale Sportsmen's Club and Chairman of the Federation's Ways and Means Committee, reported on the Coon Dog Trial and on the First Annual Picnic of the Federation, both of which took place since the last Quarterly Meeting of the Federation. Irwin Clemens of Royersford, former President of the Federation and present President of the Royersford Hunting and Fish Association, offered to be host when the Ways and Means Committee will hold its next regular meeting.

Howard Shallcross urged that the Federation contact legislators to request the passage of a bill through the State Legislature to prohibit dumping along streams and to provide for establishment of adequate borough and township dumping areas throughout the State. Mr. Shallcross added that this is quite a problem in this "age of canned goods and liquids". At this point it was decided that the Federation should have as its guest at the next Quarterly Meeting a representative from the Schuylkill River Valley Restoration Association to talk and show moving pictures which depict existing pollution of the Schuylkill River as well as progress made toward removing pollution at various points along the Schuylkill.

Russell Krupp and Howard Shallcross, as well as Howell I. Dietrich, formerly of Philadelphia, now of Upper Darby and a member of the Lower Merion Rod and Gun Club, discussed the matter of urging legislation to decrease the number of "meat hunters" during deer-hunting seasons and prohibit killing of very young deer, especially during antlerless deer seasons. Also, a motion was made, duly seconded and carried, resolving that the delegates who represent the Montgomery County Federation at the Southeastern Division of the State Federation of Sportsmen's Clubs take to the next meeting of the Southeastern Division a motion that the Game Commission be requested to provide adequate feed for deer during the winter months.

George Deems of Ambler, President of the Wissahickon Field and Stream Association, and John Miller of Narberth, former President of the Federation and a member of the Lower Merion Rod and Gun Club, urged that the Federation request the Game Commission to provide adequate game protection in Montgomery County by increasing the number of deputy game wardens.

The next Quarterly Meeting of the Federation will take place on the third Monday in October, when the Lansdale Sportsmen's Club will be the host at the Fairmount Firehouse in Lansdale.

(To Members of the Federation: Will you please let the members of your Club know as soon as possible that the Federation will hold its SECOND ANNUAL CLAM BAKE on August 17th in the Montgomery County Park at Green Lane, Pa.? All members of our member clubs are invited to come and bring their families and friends. Already there are those who have disposed of many tickets for this affair. Can you help to sell some? They are $1.00 each and, if you cannot purchase them from someone in your Club who should already have them, they may be procured from Merle Flemming of Royersford).

ANNOUNCE WINNERS IN FISHING CONTEST

Winners in the annual fishing contest conducted by the Middletown Anglers' and Hunters' Association have been announced.

Winners, prizes and size of fish follow: First, Samuel S. Gruber, $5, smallmouth bass, 4 pounds, 19¾ inches; second, Charles F. Lynch, $3, smallmouth bass, 3 pounds, 13½ ounces; third, Karl Mathias, smallmouth bass, 3 pounds, 18½ inches.

Membership contest winners, first, Charles I. Faust, $10; second, John Staub, $5; third, Norman Stuckey, $2.50. The club has 257 members.

Martin Hollash, R. D. 3 Canonsburg, caught this 11½ inch calico bass in Pymatuning Lake last season.

COMMITTEE REPORTS ON CONSERVATION EDUCATION

This committee of the State Federation did not meet since February 11, 1940. Yet the chairman and a number of the committee memebrs have been quite active. I wish to report the activities of the committee.

1. Any Junior or Senior High School may establish a course in Conservation provided an outline of the proposed course has been approved by the Department of Public Instruction. Some schools are already planning programs.

2. Any teacher who is qualied to teach science may be qualified to teach conservation.

3. A meeting was held May 15, 1940, which was attended by representatives of the Department of Public Instruction, Department of Forests and Waters, the Game Commission, the Fish Commission and the Committee on Conservation Education.

It was agreed to appoint a committee to study publications for future recommendations.

While considering the teaching of Conservation at State Teachers Colleges, it was agreed that we might begin this program by the various departments arranging for lecturers to deliver lectures at the Teachers Colleges next year.

The departments also agreed to contact County Institutes of Teachers to lecture to the teachers in service. Some lectures are already arranged.

The chairman and a member of the Committee on Conservation Education visited the School of Conservation at Tennessee University and observed the set-up there. Conservation is really being taught in Tennessee. Two men who head the Educational Service Staff of Conservation Department teach the teachers who attend the School of Conservation during the summer. During the school term they visit the schools of the state to encourage and promote the teaching of conservation.

In Tennessee the Conservation Department includes Fish, Game and Forestry divisions. To establish a sound educational program in Pennsylvania it will become necessary to set up some kind of a clearing house between the various departments. Perhaps one man from the staff of each department can be appointed to meet from time to time to discuss this work.

The Committee on Conservation Education of the Federation of Sportsmen's Clubs will need the support of the entire Federation to drive a program across. Will the Federation endorse what all the the Committee has done and recommend this clearing house or Commission of Conservation that we suggest to the various departments of Pennsylvania that should be interested in Conservation?

Robert W. Steventon, Chairman
Committee on Conservation Ed.

A standard heavy plug, of about five-eighths of an ounce in weight, should be cast beyond the rise of a bass. The quarter-ounce plug or bass bug may be cast directly to or over the rise of the feeding fish.

GOOD TROUT FLIES IN LATER SEASON

Comments R. E. Angst, expert fly fisherman of Pottsville, relative to effective fly patterns for later season trouting. His observations are well worth filing for future reference.

We promised to present effective flies for June. Some of these, in fact nearly all of them, have been given before because the flies used in May are generally good also in June. In presenting these fly lists we do so with a great deal of confidence because they are flies that have proved their effectiveness right here in Pennsylvania over a period of years not only for ourselves but also for other anglers. It has been said that it isn't the fly but the presentation thereof that causes the strike. That is partly true but one presents a fly better in which he has confidence and for a beginner confidence in the pattern is fifty per cent of the fishing.

Many times we have been fishing a stream when no fish could be raised. Years ago such an occurrence worried us. We imagined all kinds of dire things; the leader was too short or too heavy, the flies weren't the right pattern or they rode wrong, the line slapped them down too hard and one hundred and fifty other things almost entirely existing only in our imagination. Today we use a reasonably long light leader and a line that fits the rod For flies we run through a half dozen or so tried and true patterns and if the fish still refuse to rise we go for a nap until they are ready to hit again. Sometimes on such occasions an odd or strange fly pattern will take a few trout but that happens so rarely as to be an exception. It is therefore, as we said before, with confidence that we give this list of effective June flies. The list is not based on guess work but derived by actually fishing.

June 1, 1936—10 trout for two anglers on size 14 light badger. June 1, 1940—12 trout for two anglers on brown bivisible tipped with green and the pale May both in size 14. That pale May has a yellow body which turns greenish with use and light buff hackle sometimes winged as a cahill but more often fished wingless. June 3, 1939—50 trout for five anglers, one 18 inches and one 19½ inches. Trout taken on brown bivisible as above, pale May as above and a dark ginger quill. The two largest trout were taken on the pale May with the cahill wing. One other large trout fell for the brown bivisible in size 12, the largest size we ever used this fly.

June 4, 1938—A wet fly day, 13 trout for two anglers. Coachman wet most effective, five on ginger quill and bread crust. Beginning of drake hatch in the Paupack. Two trout taken late in the evening on badger dry fly size 12.

June 5, 1937—Another wet fly day—12 trout for two anglers all taken on Coachman, bread crust and ginger quill wet flies. Murky, high waters forced the use of wet flies.

June 6, 1937—19 trout for two anglers—all taken on light ginger quill size 14 dry fly. Broke leader tippet on one specially nice fish. Gut probably broke when tied before soaking sufficiently in changing flies.

June 8, 1936—6 trout one angler, taken on size 14 white badger almost a plain white bivisible.

June 10, 1939—11 trout two anglers, taken on brown or furnace hackle bivisible except one trout 13 inches long on pale May.

June 11, 1938—24 trout three anglers, all taken on brown flies including the dark ginger quill, the brown bivisible and Wickham's fancy. One large trout lost on the golden varient. (It left with fly and part of the leader the tippet—due to failure to get below trout when hooked. It got the stream's force behind it and the tackle wasn't strong enough).

June 11, 1938—8 brookies two anglers—nice fat fish on Sch. Haven special. A light cahill should substitute very well for this fly but it seems it doesn't as trout flipped the cahill and took the special.

June 12, 1937—Young Woman's Creek—12 trout two anglers, the legal limit up there—all taken on pale May size 14 but it had to have wings if one wanted trout over 9 inches which is the size limit in this project stream.

June 12, 1938—18 trout two anglers—fifteen of these taken on Wickham's fancy size 14—other three on pale May in evening when a hatch of pale Mays occurred. Prize fish a 15 inch brookie on the pale May taken by the son.

When fishing from a boat always rig up both the fly and casting rods. Rowing around the water, one will find spots for both the fly and the plug.

Regina Ott of Stouchburg with a carp caught by her father, John Ott of Lenhartsville. This carp was caught in Maiden Creek, Berks County, near Lenhartsville on a flyrod. Par-boiled potato was used as bait.

Another top flight smallmouth bass for last year was this 20½ inch 5 pound fish taken in Edinboro Lake, famous Erie County muskie water by H. H. Gerber of Farrell. It had a girth of 14 inches. Edinboro Lake, by the way, was never thought to harbor smallmouth bass, hence the surprise element in this fine catch.

HINTS ON PLUGGING IN LAKES GIVEN

How far shall a plug be cast in order to catch fish? How often that question comes into the mind of the beginner, observes Tom Luckens of Pottsville. They do seem to have a twisted idea that casts of 30 or 90 feet are always necessary if they are to be fortunate in snagging a few for the bag. This, however, is wide of the real truth, but it is the natural reaction. Even those of us who learned to operate an auto some years ago wanted to see how fast we could drive right from the start. Learning to walk before we try to run is the important thing.

We shall never forget a time when we were using a sinker about three-quarters of an ounce and two night crawlers and sailing it cut into the lake about 150 to 175 feet. Big stuff, we thought, until another fisherman about 50 feet away said to his companion, "Why don't he go over on the other side?" Remarks such as that do take the wind out of your sails and make you want to find out how far a cast must be made.

If we were to look up the casting of the tournament casters, we'd find that they have turned in records of 323 feet for the three-eighth ounce plug and 396 feet for the five-eighth ounce weight. It would seem then that casts of 150 feet would be all right. There is something about this distance casting by those competing in tournaments that is not stated. That is accuracy.

How far can they cast and hit a target about three feet in diameter? There is no doubt in our minds that only by accident such a target could be reached at the long range which they turned in. The equipment they use is primarily for distance, not accuracy. Their reels are not the kind the everyday fisherman uses or buys in the tackle store. They are doctored with special spools, gear grease, free spools that have been set for just enough clearance and everything just right for an easy running reel.

The persons competing are experts, coming from the great army of fishermen who are able, through their continual practice, to really put some weight behind their cast and still not be bothered with back lashes. Their ability far exceeds that of the average person for the simple reason that they keep at it continually and are not held back in their practice with just week end trips as the majority of the fishermen are.

The important thing is accuracy in the cast. Promiscuously throwing a plug around just gets the stragglers, and they are few. Learn the right way; find a target to shoot at, even though it may be but twenty feet away, and then hit it. Keep practicing, and in a few weeks that same size of a mark will be reached at a much greater distance, and casts of 50 to 60 feet will often be sufficient.

When plugging at night, particularly when it is pitch dark, there is no such thing as seeing that mark. The range must be found by the sound of the working bass.

Many times these fish are doing their scouring around in search of food in the proximity of the shore line. Be careful not to overshoot the mark and get tangled in the bushes on the shore. However, if you do, there is no other way than to row over and get the plug, but at the same time, that bass is down. How long it will be before he again starts to work is never known. It may be just a few minutes, or then again, it may take longer. Some times they are put down for an hour or more. There is the great possibility that he will start again, right in the same place, because that is his own feeding ground.

Perhaps if the place were examined closely, it would be seen that the bass has a fine spot in which to gather things to fill that cavity in his mid-section and at the same time offer protection against oncoming danger. He is the boss there, too, usually taking over in the evening, and remaining there for the night. Smaller bass stay away from it, because they themselves may fall victim to the appetite of the king of the roost.

If that boss is caught, mark the spot well, for it will not be long before there will be another in the same place, taking advantage of all of the food and protection it had to offer. Perhaps several days will pass before this takes place, but there will be one there, somewhat smaller than the first, perhaps, that up to this time has been kept away by the larger fish.

It is in those places that the plug must be thrown. Use a surface type, and make it dance around there. Entice them into hitting. We know that they sometimes follow such a plug for some distance before smashing it, but they must be cast right in their lair, not 10 feet away. Put that plug where they are working so you know that they have no reason for not seeing it and your chances are much better than promiscuous casting all over the entire lake.

BOOK ON FISHING BY PITT PROFESSOR

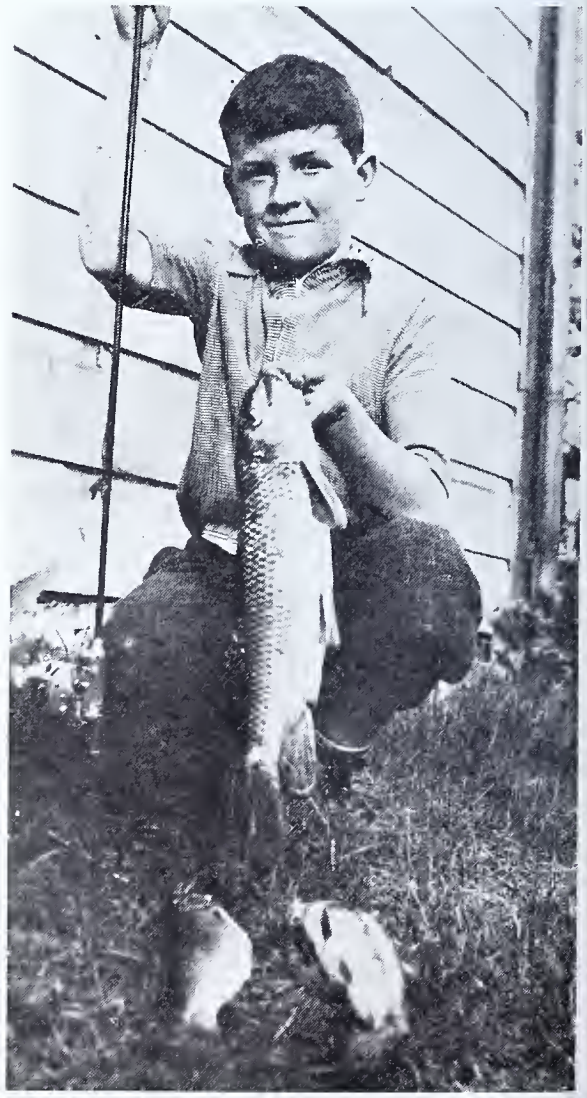
Edwin L. Peterson is listed in the faculty directory at the University of Pittsburgh as an assistant professor of English. His many students know him as an inspiring teacher in creative writing classes. But many of them did not know that he is also an expert angler.

Now that his book, "No Life So Happy," has appeared, the campus is buzzing, for the book proves that Professor Peterson knows fishing as well as writing.

Presuming that a rather technical book on trout fishing would be more interesting if a girl were introduced into the narrative, Peterson has a lady Tarzan as one of the characters. And the lady angler exhibits skill at casting, enough so that the author shouts "marvelous."

The author describes his experiences in trying to fool trout with flies and indicates that(according to his tastes, trout fishing is the only angling worth while.

The title of the book is taken from a phrase in Izaak Walton's "Compleat Angler."



Mighty proud of this 18½ inch May sucker taken in Tuscarora Creek this year is Raymond White of East Waterford. On the day he scored the each he also landed another sucker and a 13 inch brown trout.

CONSERVATION EDUCATION

(Continued from Page 5)

trout stream such as the Yellow Breeches and why the Conodoguinet Creek was fundamentally a bass stream. Worked into these discussions came the topic on the enemies of our fish which of course brought up the subject of water snakes and a well planned crusade against them. Finally in concluding this five week period of the biological background of the fish of Pennsylvania we took up the subject of forage which in turn made it necessary for the members to study something about insects, insect larva, nymphs, the plankton, algae, minnows, grubs and the lowly earthworm. The *Pennsylvania Angler* was a great help to our club during this phase of our study.

"I contend that education is relative and that if you can get your students interested in fishing or hunting, biology or some other science, courses can be worked in painlessly and the student will make better progress than he would from the old textbook to student to teacher method. There are so many educational possibilities here that it would take up all of your time just discussing that angle so I will pass on to the next phase of our club activity, getting acquainted with tackle and equipment.

"It's really surprising how little fishermen know about fishing tackle and its correct use so I decided we would start the youngsters off right by making a thorough study of tackle just as we did of fish, stream and forage.

"During this period we brought in the various types of rods—fly, casting, telescope, deep sea and the members were taught the purpose of each rod. How they were constructed and the care of them was also pointed out. Reels then came in for a going over and the relative merit of the automatic reel as against the single action fly reel was taken up. Our members learned the difference between oiled and enameled fly lines and that the letters H-G-F-E-D had special significance. Hooks were given careful consideration and our members know the difference between sproat, hollow points, snelled, carlisle, Kirby and Cincinnati and what the numbers mean in designating hook sizes. What spreaders, swivels, snaps, stringers, shot, leaders and spoons are was also taken up. We brought fly tying equipment to school and most of the youngsters are now tying their own flies. We spent three periods on learning the various types of flies. This incidentally was one of the most enjoyable parts of our club work.

"Next came the outdoor classes of fly casting and plug casting so by the time April 15 rolled around the boys were ready for the trout season. At our club meeting before trout season opened we exchanged views as to what would be the best bait to use, the best streams to fish and the most sensible clothes to wear. After the season had been underway, each week we would report in club where we had fished, what we had caught and the lure used and any additional information which might be forthcoming from our members. In this way it made the boys feel that they had accomplished something definite and were being accepted as real fishermen.

"Scattered throughout the year we had movies sent to us by one of the large bait companies which spurred the boys' interest and taught them many things which I am sure they will retain. All in all it was one of the most enjoyable experiences in the teaching course and I hope that real soon schools and colleges throughout the country will realize the value of our great outdoors, their relationship to the mental and physical well-being of the individual and establish courses in fishing, hunting and conservation not just as extra curricular activities but on the same scale as those in the regular curricular".

"You see in our club, Doc, we tried to put over the idea that fishing is nothing more than a way of educating oneself to a simple, honest calm way of life, that fishing can teach us to think and consider the other fellow's rights and to broaden our vision.

"One of our boys said, 'You see so many things along the stream birds, flowers, colored rocks, sunshine on the water, sometimes you even forget your fishing.'

"That's about the whole story, Doc. We expect to do bigger things this year and hope to see the development of similar clubs in all the high schools throughout Pennsylvania.

"Wouldn't it be fine if we could have interscholastic fly and bait casting tournaments, fly tying contests, rifle and clay pigeon matches?"

"CHAIN LIGHTNIN'"

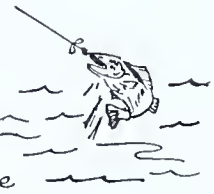
(Continued from Page 9)

these lures is almost certain to result in a badly twisted line, as well as quickly fraying through the line when attached directly. It is also a good plan during periods of low, clear water, to use artificial gut leaders, 6 to 12 feet in length, and testing 15 pounds.

The secret of happiness is not in doing what one likes but in liking what one does.

Lots of a lure—and we don't mean glamor is the wording used for this photo. Audrey Sides of Lancaster found this big fish lure in her pop's gear and not knowing that it was just a gag for a demonstration of fly tying at the Lancaster County Fish and Game clinic, tried it out in the family fish bowl. P. S. She was fishing for the Monster Whale, of course, not Geppeto's goldfish.

MIDDLE ATLANTIC ASSOCIATION OF CASTING CLUBS



An association of sportsmen's clubs formed to promote tournament casting, encourage organization among anglers assist in conservation; and support all moves toward true sportsmanship.

Association Notes

A meeting of the executive committee was held on July 23rd, in the Land Title Building, Philadelphia. The success of the annual Tournament held last June was discussed by the chairmen of the various committees and a more extensive program planned for the coming year. Several new member clubs have joined the association since the tournament and the new slogan is "Fifty clubs for 1941". The most recent addition is the Delaware County Sportsmen's Association with a large membership in the suburban section of Philadelphia.

It was suggested that a special meeting of the rules committee be called at an early date to revise all casting rules so that additional encouragement would be offered to the angler who takes this branch of the sport seriously. A prospective feature for the next tournament will be an exhibition by professional casters for the benefit of the novice who will be able to profit by their technique. Free instructions in bait, fly and surf casting at the hands of experts for any one regardless of his affiliations is a novel idea and should go far towards interesting sportsmen in the Association.

A conservation program is also being worked up for the ratification of the member clubs.

Branch Valley Fish, Game and Forestry Association

If angling in the neighborhood of this Club is as good as the writer has been told it is, the members of the Branch Valley Fish, Game and Forestry Association are bringing home good-sized fish for the frying pan.

They tell us that Ray Betts, Leon Sterner and Lester Void, all of Perkasie, Pa., have been doing their casting practice out on the streams this summer.

Delaware County Field and Stream Association

The Middle Atlantic Association of Casting Clubs welcomes, as its newest member, the Delaware County Field and Stream Association.

This Club was organized in March of 1939 and now has a membership of more than 400. In addition to belonging to the M. A. A. C. C., this Club also holds membership in the Delaware County Federation of Sportsmen's Clubs and in the Schuylkill River Valley Restoration Association. The officers of the Delaware County Field and Stream Association are as follows: President, Bill Everman; Vice-President, Harry Sauers; Treasurer, Al Dreer; and Secretary, Dick Newman.

Meetings of this Club are held in the Norwood Fire Company Hall, Norwood, Pa., on the first Monday of each month. At the last meeting, there was a discussion on the subject of a permanent club site suitable for pistol, rifle, trap-shooting, surf, bait and fly casting, as well as for a rearing pond. This matter will be given further consideration at a later meeting. Following the regular club business, another set of interesting motion pictures were shown.

Plans are well underway for this Club's Annual Field Day, to be held late in September or early in October. This event will furnish the climax to an unusually busy twelve-months' period. Among its activities during the past year, this Club deserves credit for the following: (1) It has completed the only Farm-Game Project in Delaware County, comprising approximately 600 acres; (2) During the Fall of 1939, it saved 50,000 fish which went over the dam at Ridley Lake—the fish were removed to the Torresdale Hatchery; (3) It helped to stock 1800 State trout in Ridley Creek this year, as well as Federal bass in Darby Creek—and at the moment, it is having three Delaware County streams surveyed for possible trout stocking, while planning to build a trout-rearing pond to raise approximately 20,000 trout annually; (4) It trapped more than 200 rabbits last Fall for release on territory which is open to public hunting; (5) It built and distributed flushing bars among the farmers in Delaware County—and it is building additional such bars; (6) It distributed over one ton of game food last Fall—some of this food was purchased by the State and some was purchased by this Club; and (7) It purchased 30 pheasants and released them on open hunting grounds, in addition to raising pheasants from 48 eggs which were received from farmers of Delaware County.

Dover Fishing Club of Philadelphia

Regular club meetings have been discontinued for the summer, the next meeting will be held on September 18th, at the club's assembly rooms in the Philadelphia Bourse Building. Chairman Mazzoni has the entire entertainment committee working on a gala program for the opening of the fall season. Rockfish enthusiasts are looking forward to the opening of the Striped Bass Derby on September 15th and are expected to win one or more of the valuable cash prizes offered. The profits from this derby will be used for the conservation of that valuable game fish and the contest is well deserving of every member's support.

A new enterprise has been started this summer that it is hoped will stimulate a new interest in angling and casting as well as create a better spirit of sportsmanship in the youth of the community. The Dover Fishing Club with the help of Mr. Joseph O'Byrne, director of the K. Y. W. Hunting and Fishing Club is conducting a Juvenile Casting Class for boys and girls between the ages of ten and sixteen years.

The object of this class is to give the younger generation the benefit of the experience of expert casters without having to acquire the art through several years of picking it up promiscuously. The technique of casting is taught in regular steps from the proper handling of the reel up to the proper form for getting the lead out for the greatest distance. Each pupil receives the personal attention of one or more instructors who have been selected from among the best casters in the East.

Classes are held every Monday night at the club's regular casting field under the supervision of Mr. Jacob A. Busch, who in the past five years has coached four championship cup teams for the Dover Fishing Club. Among the instructors are Harold G. Lentz, former world's champion surf caster; George Gaul, Vice-President of the Association of Surf Angling Clubs; Ralph Bowman, present eastern surf casting champion; and others equally famous in this line of sport.

It is not necessary for the pupil to own a rod and reel for all the necessary equipment is furnished. In fact, such care has been taken in selecting the proper casting outfits for the class that it is preferable that the pupils do not bring their own, unless they purchase it at the advice of one of the instructors.

Classes will continue up to the end of September at which time a special Juvenile Casting Event will be held in connection with the Dover Fishing Club's annual open tournament on September 22nd. This event will afford the youngsters an opportunity to gain a meritorious reward for their efforts during the summer. Pupils in this class will be eligible to compete in the annual National Boy's Tournament conducted by the Association of Surf Angling Clubs this fall as well as numerous other club tournaments staging special juvenile events.

Gloucester County Game and Fish Association

Members of this Association have been busily engaged in catching bass and sal

Donald Sawyer of the Monocacy Field and Stream Association with the 23½ inch brown trout he caught on first day of the trout season this year.

water fish in Pennsylvania and in New Jersey. At a later date we shall have some of the results to report to our readers.

Among those from the Gloucester County Game and Fish Association who have been seen "out fishin'" are the following: Ray Neirle, Carl Leisy, Lorin Ott and Donald Ott, all of Mantau, New Jersey, and Daniel Pierce, of Glassboro, New Jersey.

Holmesburg Fish and Game Protective Association

On August 12th, this Association will hold its regular monthly meeting in the Club House, located at Pennypack Street and the Delaware River, in Philadelphia. Refreshments will be served. Preceeding the meeting, there will be practice matches in trap, rifle and pistol shooting, as well as in plug and fly casting.

From September onward, the Holmesburg Fish and Game Protective Association will hold its meetings at the Holme Library, Frankford Avenue and Hartel Street. Arrangements are being made for a number of excellent speakers and new hunting and fishing moving pictures for the coming Winter season, when meetings will be held regularly on the second Monday of each month, according to Milton W. MacBain, of Philadelphia.

Since the Third Annual Tournament of the Middle Atlantic Association of Casting Clubs, held June 9th at Willow Grove Park, the plug casters of this Club and of the Lower Merion Rod and Gun Club have exchanged several practice-match invitations. On the occasions of the practice matches, casters from each of these clubs "improved their style" while enjoying the time spent with the casters from the other club.

Arthur Clark of this Club (who is also Chairman of the Membership Committee of the Middle Atlantic Association of Casting Clubs), asks anyone who desires information concerning the Fall Outing of the Holmesburg Fish and Game Protective Association to contact him at No. 9 Kirkwood Avenue, Fox Chase Station, Philadelphia. This Outing will be held in September at a date not yet determined when these paragraphs were written.

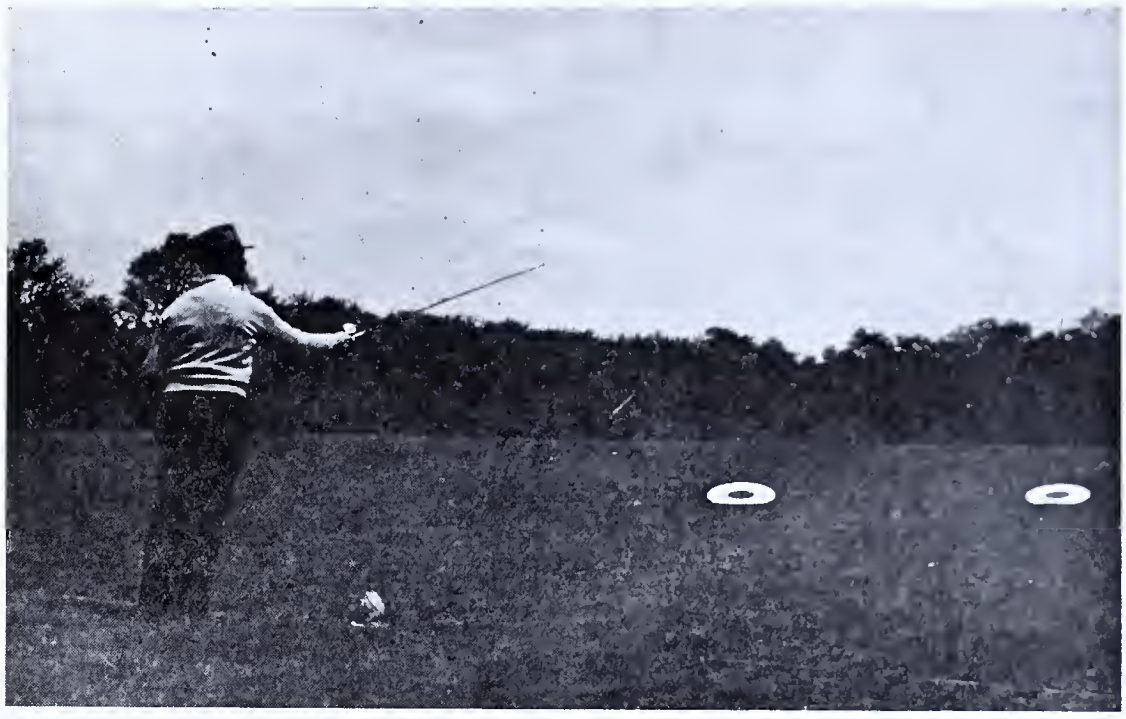
Lansdale Sportsmen's Club

The Blue Springs Dam has been entirely cleared by the N. Y. A. and through the efforts of Harry Z. Cole, Fish Protector of Bucks and Montgomery Counties. There are sunfish, catfish, perch and millroaches now in this Dam, on which youngsters as well as adults are fishing daily.

On the fourth Tuesday in August, this Club's outdoor rifle and pistol range will be the setting for the regular monthly meeting of the Club. The range is located on Lansdale Avenue, about one mile East of Lansdale. Refreshments will be served.

Plans are completed for this Club's Third Annual Picnic, to be held August 10th (August 24th, in case of rain on the 10th) at Florex Gardens, North Wales, Pa. Casting on the lake there, trap shooting and various games will be among the attractions. Scoring for prizes will be based on the "Lewis-Class" System, according to William Stoneback, President of this Club and President of the Montgomery County Federation of Sportsmen's Clubs.

The next Quarterly Meeting of the Montgomery County Federation of Sportsmen's Clubs will be held on the third Monday in October at the Fairmount Firehouse, Lansdale, where the delegates from the fourteen member clubs of the Federation will be the guests of the Lansdale Sportsmen's Club.



Dave Mazzoni, ex-president of the Dover Fishing Club of Philadelphia, is an ardent plug caster. Almost any evening, when not playing his favorite stream, he can be seen out on the club's casting field wearing out the accuracy targets.

Lower Merion Rod and Gun Club

On July 21st this Club sent to the American Legion's Boy State Camp at Indiantown Gap, Pa., sixteen-year-old George Steckel, Jr., of Ardmore. Each year the Lower Merion Rod and Gun Club sends to this Camp, with all expenses paid for ten days, a junior member or the son of a senior member of this Club. Last year Raymond Chain, Jr., of Narberth, was the lucky boy who had this opportunity and who, upon returning to his home, said he had had a grand time at the Indiantown Gap Camp, where he enjoyed participation in various boys' sports, as well as in the model state government which is conducted by the boys there for the purpose of enabling the younger generation to better understand the functioning of state government and the responsibility of each individual to state government.

The Lower Merion Rod and Gun Club is arranging to hold its Fall Outing in September. During the past eight years, Fall and Spring Outings of this Club have been held on the Ridgway Farm at Bethayres, where fine old shade trees, a lake and an open fireplace on spacious grounds have provided facilities for picnicking as well as for various casting and shooting events in which prizes are awarded to winners.

Members of this Club are entering trout, bass and various salt water fish in the Club's Largest Fish Contest for 1940. Throughout the summer, Surf Fishing Trips are being conducted under the leadership of John A. Miller, of Narberth; while Deep Sea Boat Fishing Trips are planned and managed by Charles Young also of Narberth. In addition, a large percentage of the Lower Merion Rod and Gun Club membership is "enjoying God's sunshine" where "the Bass're Bitin'"—and where men "learn to take time out to live in the simplicity and cleanliness" which are the earmarks of sportsmanship and of Americanism.

Monocacy Field and Stream Association

Lawrence L. Lehr, of Bethlehem, Secretary of this Association, tells us that the Monocacy Field and Stream Association held its Annual Clam Bake on Sunday, July 21st.

This Club, which has a membership of nearly 500, has an efficient Fish and Game Committee which has made application for a stream improvement project on the Monocacy Creek.

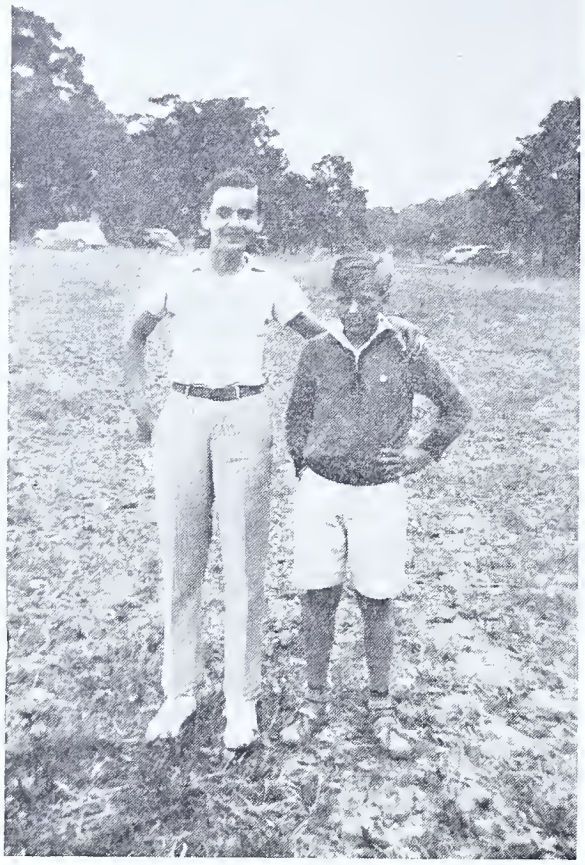
The first Fall meeting of this Club will be held on the first Monday of September in the Club Association Room, Mauch Chunk Road and Elizabeth Avenue, Bethlehem, Pa. At the last regular meeting, following the general business and a discussion on how to improve fishing, club members were entertained with movng pictures on trout and salmon fishing.

A large group of the membership of this Club attended and competed in events which took place at the Nazareth Bi-Centennial, held Sunday, July 7th, in the Nazareth Borough Park. At this celebration on the 200th anniversary of Nazareth, two of the members of the Monocacy Field and Stream Association were among those who won prizes. They were: William Sherdan and Donald Sawyer.

Montgomery County Fish, Game and Forestry Association

The grounds of the Eastern Penitentiary at Graterford will be the scene of this Club's Outing, for which plans are, at this writing, well underway. Martin Horn, of the Montgomery County Prison Home at Black Run, Pa., is arranging for trap shooting, soft ball games, a dog show, casting events and a quoit tournament, as well as a tasty picnic supper, for this occasion.

It is reported that members of this Club have been unusually active in conservation programs, in casting and in actual fishing during the present summer months.



On the left, Guilliam Clamer of Wormleysburg, who won the Baseball Throw for Boys and his brother Frank who was a close second at the Montgomery picnic.

Winners of the Peanut Scramble at the Montgomery picnic. Left to right, Billy Stoneback, Jr., Colmar, who won the prize for children of six years or under; Grace Godshaw, Norristown, winner of the prize for all girls and Howard Landis of Rahns, winner of the prize for all boys.

Winners of prizes in the Rolling Pin Throw for Women at the Montgomery picnic. Left to right, Mrs. Arthur Trumbore, Sumneytown, Mrs. A. L. Sinclair, Norristown, and Mrs. William Stahley, Rahns, winner of the event.

MONTGOMERY FIELD DAY ATTRACTS 400

Despite unusually cool weather, approximately 400 men, women and children were in attendance at the First Annual Picnic of the Montgomery County Federation of Sportsmen's Clubs, recently held at the new Montgomery County Park, Green Lane, Pa.

Various games and contests were conducted during the afternoon, including a baseball game between the Royersford "Hookies" and the Sumneytown team, which ended in a score of 13-12 in favor of the "Hookies".

In the Plug Casting for Accuracy Contest, Howell I. Dietrich, formerly of Philadelphia, now of Upper Darby, won first place. The additional winners in this event were: Ernest Jenkins of Narberth, L. W. Shiffert of Lansdale, John Ruth of Kulpsville, William Stoneback of Lansdale (President of the Federation), W. F. Townsend of Perkiomenville and Fred Reed, also of Perkiomenville. Prizes were awarded in this event to those named, as well as to those named in the events below.

In the Plug Casting Novelty Event, the winners were as follows: First, Ellen A. Dietrich, formerly of Philadelphia, now of Upper Darby; second, a tie between Ernest Jenkins of Narberth and James Cassel of Skippack.

Those who won prizes in the Baseball Throw (for distance) for men were: Paul

Howell I. Deitrich, formerly of Philadelphia, now of Upper Darby, winner of the plug casting for accuracy event at the annual picnic of the Montgomery County Federation of Sportsmen's Clubs.

William Stoneback of Colmar, left, president of the Montgomery County Federation of Sportsmen's Clubs and Irwin Clemens, Royersford, last year's president of the Montgomery Federation, standing under the banner at the entrance to the Montgomery county park when the Federation held its first annual picnic.

Hunsberger of Green Lane, Arthur Trumbore of Sumneytown, John Ruth of Kulpsville, S. E. Carpenter of Doylestown (the Bucks County Game Protector), Philip Berkes of Norristown and Ambrose Gerhart of Souderton (the Montgomery County Game Protector).

The winning team in quoits consisted of: Harry Cole of Norristown (the Fish Warden of Bucks and Montgomery Counties), and John Markley of Schwenksville.

The Rolling Pin Throw for Women was won by Mrs. William Stahley of Rahns, while Mrs. A. L. Sinclair and Mrs. Arthur Trumbore, the former of Norristown and the later of Sumneytown, also won prizes in throwing the rolling pin.

In the Egg and Spoon Race for Women, the following placed 1st, 2nd and 3rd respectively: Mrs. Robert Gibb of Royersford, Mrs. William Stahley of Rahns and Mrs. Arthur Trumbore of Sumneytown.

Rose Litka of Collegeville placed first in the Baseball Throw for Women, and Mrs. Harry Hunsberger of Sumneytown placed second in this event.

In the Baseball Throw for Boys under 15 years of age, Guilliam Clamer of Wormleysburg won first place, while his brother Frank was a close second.

Winners of the Peanut Scramble were as follows: For boys—Howard Landis of Rahns. For girls—Esther Godshaw of Norristown. For children of 6 years or under — Billy Stoneback, Jr., of Lansdale.

(The Second Annual Clam Bake of the Montgomery County Federation of Sportsmen's Clubs will be held on August 17th in the new Montgomery County Park, Green Lane, Pa. All members of member clubs are invited to come and bring their friends).

BASS ENTERED IN CHESTER CONTEST

Two fine catches of bass in Chester County streams were reported to Coatesville Hardware Company store, headquarters of the annual county fish contest sponsored by Chester County Rod and Gun Club. Both fish were entered in the contest.

Roy Brownback, Westwood, reported the catch of a largemouth bass that weighed four pounds and two ounces and measured 19¾ inches length. The bass was caught in Beaver Dam.

Leroy McConnell, Lionville, reported the catch of a smallmouth bass that weighed one pound and 15 ounces and measured 15½ inches in length. The bass was caught in Cupola Dam.

Love is characterized by a sinking feeling. It begins when a woman sinks in a man's arms and often leads to her arms sinking in the man's sink.

Winners of the Egg and Spoon Race for Women, each holding an egg on a spoon at the Montgomery Federation picnic. Left to right, Mrs. Robert Gibb, Royersford, first place, Mrs. Wm. Stahley, Rahns, second place, and Mrs. Arthur Trumbore, Sumneytown, third.

Plug casting on the lake at the new Montgomery County Park on the day of the Federation Picnic there. Left to right, W. F. Townsend, Perkiomenville, C. J. Eurich, Lansdale and Fred W. Eurich of Line Lexington.

Winners of the Baseball Throw for Men. Left to right, Paul Hunsberger, Green Lane, Upper Perkiomen Sportsmen's Association; Arthur Trumbore, Sumneytown, Boulder Valley Sportsmen's Association; John Ruth, Kulpsville, Lansdale Sportsmen's Club; S. E. Carpenter, Doylestown, Game Protector of Bucks County; Ambrose Gerhart, Souderton, Montgomery County Game Protector, and Philip Berkes, Norristown, Montgomery County Fish, Game and Forestry Association.

HERE AND THERE IN ANGLERDOM

Ranking with the finest brook trout taken in Pennsylvania waters this year was the fine brookie caught by Earl W. Jeffery of Gordon. Earl was fishing in Bear Creek, Schuylkill County, when he scored the catch on a red worm. The fish measured 16 inches in length and tipped the scales at one pound 8 ounces, a fine native in any water.

Fred Hartman, prominent McKeesport angler, caught an exceptionally fine smallmouth bass in Licking Creek, Fulton County, early this season. His catch measured 19 inches in length and weighed 3 pounds 3 ounces.

One strike, one fish would be a fitting slogan for Roy Leaman of Lebanon who scored with the heaviest largemouth bass to be reported to date from Lebanon County waters. Leaman had only one strike on the morning he made the catch in Penryn Lake.

Casting spinner and pork rind, John Shaffer of Cumberland, Md., took these fine bass in Lake Gordon, Bedford County, last season. The larger fish tipped the scales at 5½ pounds, the other 3½ pounds.

From R. W. Hanson of Loyalhanna, Westmoreland County chairman of the Westmoreland-Allegheny County Trout Nursery Fund, comes a report on early season bass catches in that section of the state. While fishing in Lake Gordon, Bedford County, Joe Marietta of Latrobe caught a four pound smallmouth bass. A 22 inch largemouth taken by Stanley Zylack is tops to date of fish landed in Westmoreland waters. A fine rainbow trout, 22 inches in length and weighing 3 pounds 8 ounces, was taken on dry fly at the Ladies Fishing Section of the Spring Creek Project by Miss Marion Bittner, nature teacher at the Latrobe Fourth Ward School.

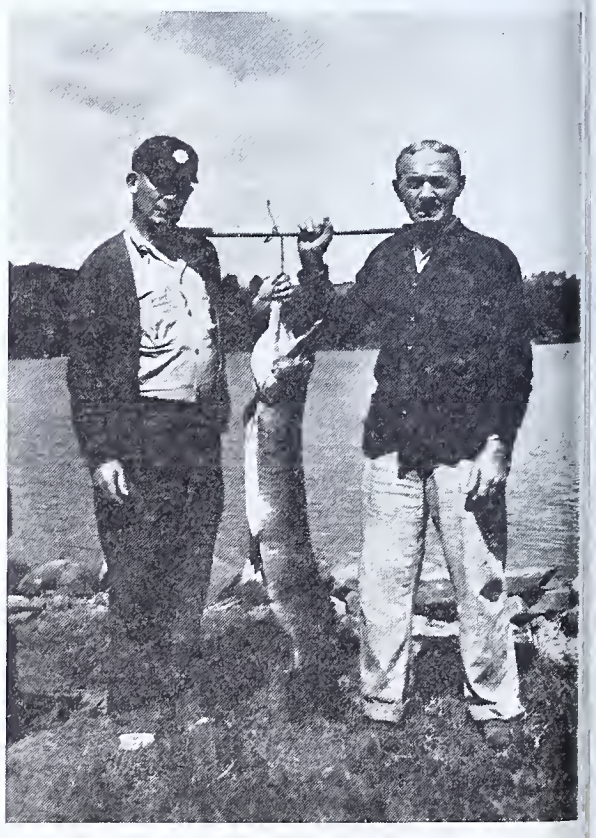
Some nice bass have been taken to date this season in Swatara Creek, according to Warden Frank Sanda of Steelton. Ralph Bear of Ephrata scored with a 14 inch smallmouth taken on a minnow. B. A. Pennepacker of Middletown took a 13 inch fish on a crayfish. Plugging in Wildwood Lake in the suburbs of Harrisburg yielded a catch of three largemouths to J. R. McKee of Harrisburg. They ranged in length from 11 to 13 inches. A complete record of his catches scored on nightcrawler from July 1 to 5 was kept by Dave Gray of Hershey, president of the Lebanon County Federation of Sportsmen's Clubs. All fish were returned to the water, Sanda reports. Fishing at Lights Dam on the first, three largemouths, all 11 inches in length were caught; July 2, four largemouths in the morning, 10 to 14 inches, in Water Works Dam; two smallmouths, 9 and 12 inches and a 12 inch largemouth in the afternoon, Swatara Creek. On July 3, two 10 inch smallmouth bass were taken in the Hershey Dam and on the morning of July 4, five bass, 10 to 12 inches in length were caught at the Water Works Dam. These fishing places are all in Lebanon County.

The Susquehanna River in the vicinity of Harrisburg, yielded excellent bass fishing early in the season, according to Sanda. Fishing in the river below the Dock Street Dam, Harold Karns of Steelton caught a splendid smallmouth bass on crayfish, his catch measuring 22 inches in length and tipping the scales at 5 pounds. Earl Ebersole of Highspire, fishing minnows and fly in the Highspire Reservoir, scored with 11 largemouth bass early in the season, the fish ranging in weight from one and one half to four pounds. George Ebersole, also of Highspire, caught 16 largemouths in the same place, his fish also ranging from one and one-half to four pounds in weight. He also took 26 snapping turtles, ranging in weight from seven to 15 pounds.

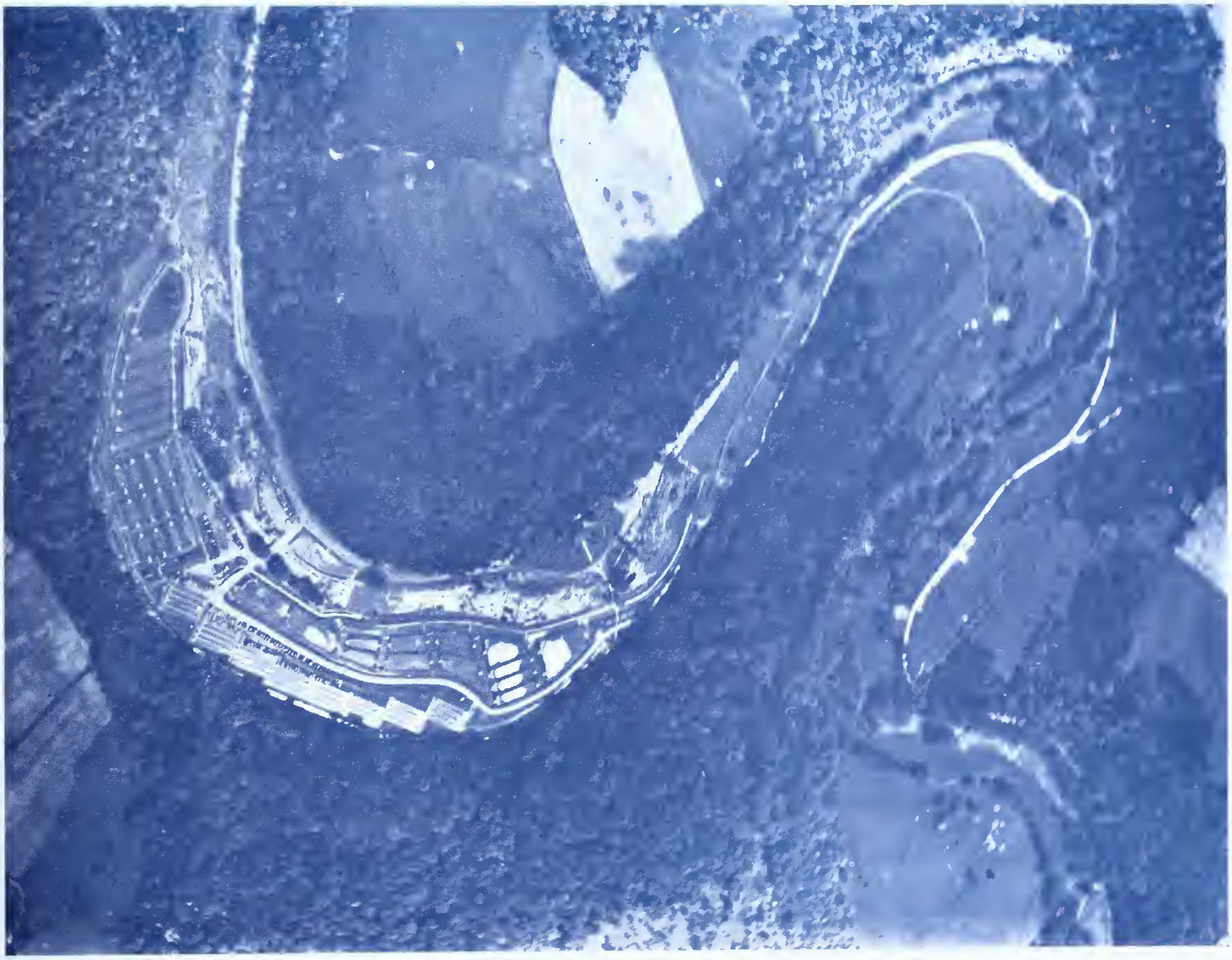
Lebanon County's ranks of ardent plug fishermen include Allen Herr of Ebenezer and George Templin of Lebanon. Plugging in Light's Dam, Herr caught three largemouth bass, 11, 14 and 17 inches in length. Templin took six bass in the same place, his catch ranging in length from 11 to 15 inches. W. Eckenroth scored with plug in taking six bass, 12 to 15 inches in length, in Light's Dam.

Writes Dick Williamson of Williamsport: "Fishermen in the village of Loyalsock thought they were in a fishermen's paradise when hundreds of silver carp came up Loyalsock Creek from the Susquehanna River to spawn. Four anglers, C. A. Tomlinsan, R. B. Tomlinson, Robert S. Merrill, and Kenneth Pidcoe caught nine carp from an old mill race off the creek in an hour. The fish ranged in length from 20 to 30 inches and had an average weight of 8 pounds. Largest carp taken tipped the scales at 10½ pounds."

Fishing worm in Yellow Creek, Bedford County, Clark Dishong, Jr., of Johnstown, caught a fine 20 inch brown trout. It weighed 2 pounds 12 ounces.



Largest muskie to be reported from Pennsylvania waters this year was this 47 inch fish taken by Robert Wilson of Pittsburgh in Canadohta Lake. It tipped the scales at 31 pounds.



Aerial view of the Spring Creek Project of the Board of Fish Commissioners, located near Bellefonte, Centre County.

IF YOU WOULD CATCH
MORE FISH . . .
KILL LESS!

PENNSYLVANIA ANGLER

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PENNSYLVANIA ANGLER

SEPTEMBER, 1940

EDITORIAL

Merit Badge for Junior Conservationists

IT IS gratifying to know there are so many groups of sportsmen so vitally interested in the merit badge which is given to those killing ten or more watersnakes.

We have commented on this editorially at various times and while the program was instituted several years ago, it has grown steadily and has been a moving factor in the organizing of Junior Conservation groups in many sections of the Commonwealth.

We have said many times, and repeat again—conservation of the future rests with the youth of today, and no matter how small the organized group may be, you will find that within a few years the results will be amazing.

Many areas have already set up certain standards for the awarding of these badges which not only cover the required number of snakes, but also provide that those qualifying must know the principal natural resources of their locality—the principal fish, birds and animals—their seasons and how protected, present evidence of direct assistance in conservation projects, such as fighting forest fires—help in checking erosion, building shelters, planting trees, etc.

If you do not have such a group within your organization, we again say that if we can be of assistance in forming one, contact the Harrisburg office and we will have a competent representative get in touch with you, who will be of every assistance possible.

C. A. French
Commissioner of Fisheries

LEADERS A LA CARTE

By PHILIP M. C. ARMSTRONG

IT IS not so many years ago that the art of fly tying was more or less shrouded in mystery, and the amateur who had penetrated the darkness and learned the secret of tying his own was regarded as a sort of superior freak.

Today the home fly tyer is not thought of either as one possessing skill out of the ordinary or as a nutty eccentric. The number of those who "roll their own" has reached such proportions that a whole new business has grown up to supply them with materials. You very likely tie flies yourself, or if not your brother or your fishing pals do so.

Curiously enough the number who also tie their own leaders is not nearly so large. The designing and tying of leaders presents no such difficulties as does fly tying, and no comparable investment in materials, to say nothing of expensive equipment. The few operations are simple and easily learned, and little time is required.

In home fly tying the actual saving in money is problematical; in fact unless the amateur acquires a considerable degree of skill and speed the chances are that his flies cost him more than they would if purchased as needed. The only profit is in personal pride of craftsmanship and satisfaction in the pursuit of an engrossing hobby. But, of course, that is worthwhile in itself.

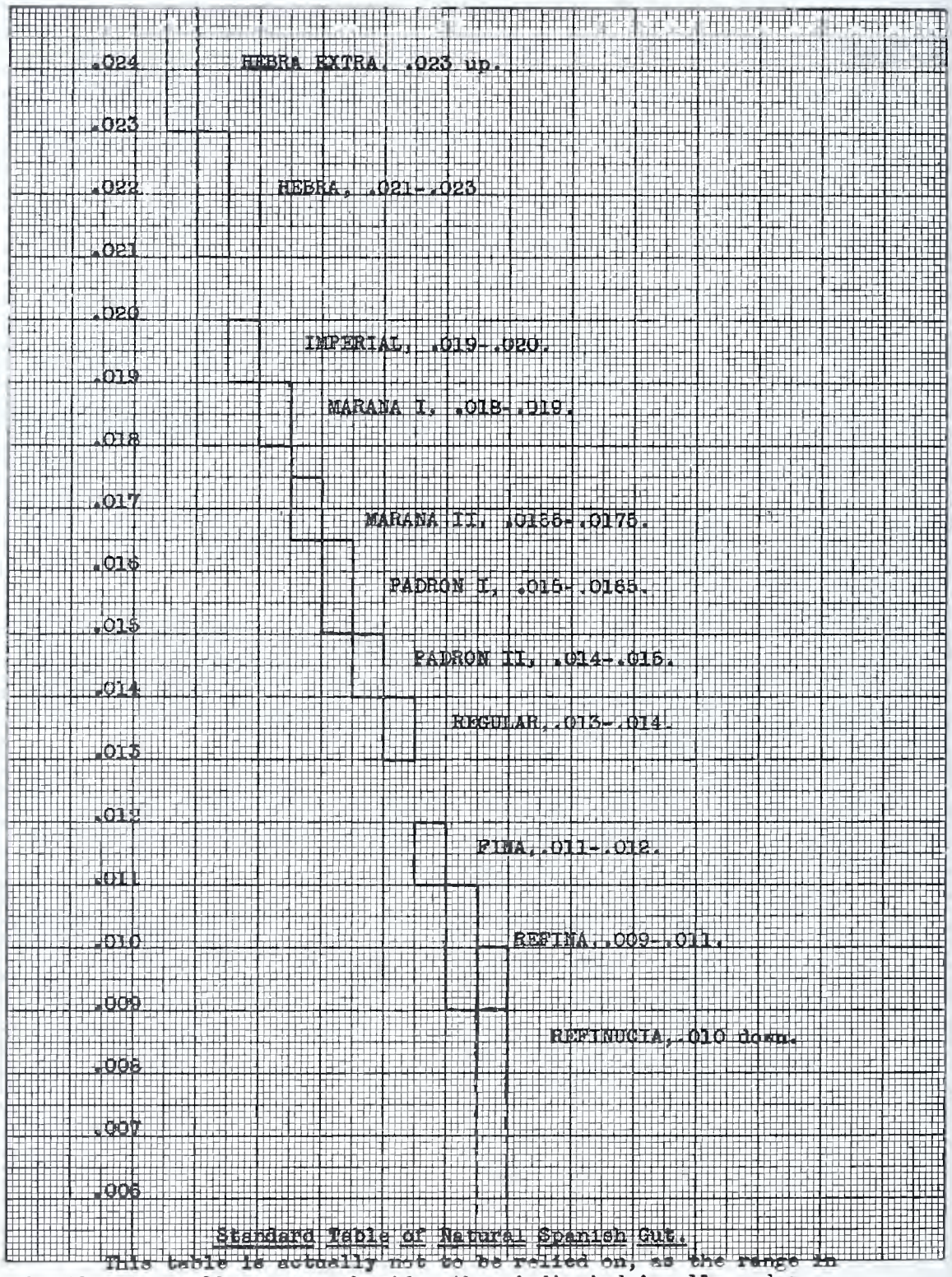
On the other hand in making up his own leaders, the amateur not only has the joy of creation, but also saves his pocketbook from periodic raids. Leaders are expensive. The materials from which they are made are relatively cheap.

Magazines and books have given the amateur plenty of instruction in fly tying, but leader making has had very little attention in comparison. Almost every year sees the birth of a new fly tying book, but if there has been one dealing extensively with leaders since Paul H. Young gave us his fine little volume, "Making and Using the Fly and Leader," I have not come across it. Fly tying presents a wide field for the writer, and a romantic one, whereas there is not so much to talk about in leaders, and no particular glamour about them.

But where would fly fishing be without leaders? You cannot do without them. Yet little thought is given to this essential item of equipment or the benefits and savings which may be derived from home construction to escape conventional design and high cost.

When you have made up your mind to tie your own leaders the next step is to decide what materials you will use. In order to help you make your choice we will look into the various kinds which are available. If you are already well acquainted with them and their respective characteristics, you can skip over the next few paragraphs, but even if you do know the story pretty well, a little review will not hurt you. Some of these leader materials are a wee bit new to a lot of us and just beginning to find their places in the sun.

Figure 1.



Standard Table of Natural Spanish Gut.
This table is actually not to be relied on, as the range in bundles is really very much wider than indicated in all grades.

Leaders, other than metal ones, which we will not discuss, are made invariably from two classes of material, gut or some form of gut substitute having approximately the same appearance and characteristic.

Until recently "Spanish Gut" was the only available material other than horsehair, long since abandoned for the purpose. It really is imported from Spain, where the culture of silkworms is an important industry. Not to go too greatly into detail, gut is actually silk, but instead of being spun into fine filaments by the silkworm itself the organ which produces the gummy material is removed by pickling the creature in acetic acid and salt, and the coarse filament which is leader gut is made by stretching the sac after it comes out of the pickle.

If you are interested in the details of the method an excellent account may be found in a chapter on the subject by Edward T. Whiffen in the late Dr. George Parker Holden's delightful book, "The Idyll of the Split Bamboo."

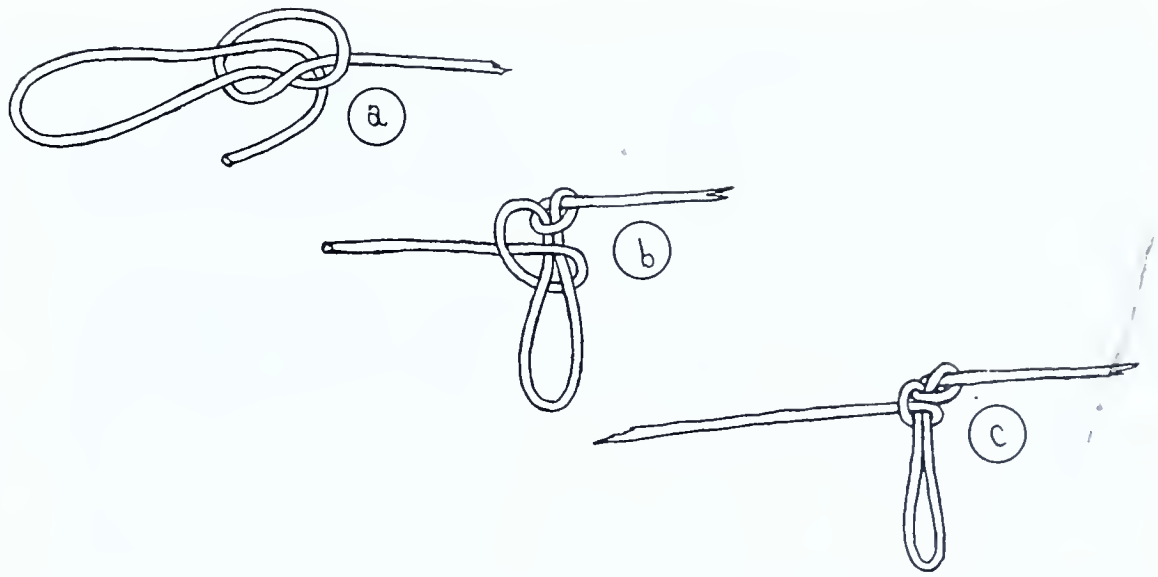
Naturally the lack of uniformity in the size and quality of the silk sacs results in wide range of qualities, sizes, lengths, and cross section shapes of the gut. Some gut is very

good, some very poor. Some is approximately round and roughly even in gauge over the greater part of its length. It varies greatly in tensile strength.

In order to make it marketable it has to be sorted, first into grades, in which roundness and uniformity of diameter are the chief qualities sought. Then each grade is sorted again into sizes by average thickness, and finally by length of strand. These sortings are done with less care than should be the case, so that even the best is exceedingly ununiform both in quality and size.

The highest grade is called "Selecta," the second quality, "Superior," and the third, "Estriada." The "Selecta" is the only one which should be used for leaders, and the better manufacturers reject even as high as half of the strands from "Selecta."

The gauges run from "Hebra," the heaviest, approximately .023 inch diameter down to "Refinucia," the lightest, which takes in strands under .010. The attached table, Figure 1, shows the theoretical range of sizes. In practice the various grades contain many strands which do not agree with the specifications. Very little "Refinucia" is available, and it is seldom found listed in tackle catalogs.



A useful dropper loop knot easily tied. (a) Throw a "single running knot" into the leader, at the point where the dropper is desired and draw the overhand knot tight, leaving as large a loop as is wanted. (b) Now throw a half-hitch around the loop with the fly end of the leader, and again draw tight. (c) The finished dropper loop. This cannot possibly slip and stands out quite straight, which minimizes fouling of the dropper tippet and fly.

Thousandths of one inch	Drawn Gut Sizes (Alcock)		B.I.W. Gauge	Drawn Gut Sizes (Lyon & Coulson) also Nylon		Drawn Gut Sizes (Weber)	
.019	3/5	.019	23	2/5	.019		
.018	4/5	.018	24	3/5	.018		
.017	5/5	.017	25	4/5	.017		
.016	6/5	.016	26	5/5	.016		
.015	7/5	.015	27	6/5	.015		
.014	8/5	.014	28	7/5	.014	DX	.014
.013	9/5	.013	29	8/5	.013	CX	.013
.012	½ drawn	.012	30	9/5	.012	BX	.012
.011	strong ½	.011	31	0X	.011		
	⅛ drawn	.0108	32				
.010	0X	.010	33	1X	.010	AX	.010
.009	1X	.0092	34	2X	.009	1X	.009
.008	2X	.0084	35	3X	.008	2X	.008
	3X	.0076	36				
.007	4X	.0068	37	4X	.007	3X	.007
.006	5X	.006	38	5X	.006	4X	.006
						5X	.0055
.005	6X	.0052	39	6X	.005	6X	.005
	7X	.0048	40				
	8X	.0044	41				
.004	9X	.004	42				
	10X	.0036	43				
.003							
.002							
.001							

Typical Tables of Drawn Gut Numbers and Sizes.

There are many other tables, few of which agree, either on sizes or numbers. There is no accepted standard on gut or gut substitutes. For this reason it is safer to buy by micrometer.

Figure 2.

In order to overcome the lack of roundness and the unevenness of diameter the so-called "Diamond Drawn Gut" is prepared by many manufacturers.

To produce this the strands of "Natural" are forced through small dies, sometimes diamond, but more often steel, and the gut shaved down until it is round and the same in gauge from end to end. This process is expensive, as it must be done largely by hand, but the results attained are very good. It is held by some that the strength of the gut is impaired by drawing, but this is not proven, and is probably not the case, though the keeping quality does seem to be affected slightly. Certainly a strand which is of constant gauge will stretch more evenly and is more resistant to rupture under strain than a heavier strand with a thin spot where the stretch comes mostly in one place.

The attached table of drawn gut gauges (Figure 2) is not to be regarded as reliable, as it represents merely the specifications of three manufacturers. Each source of supply employs a range of gauges and designations of his own. There is absolutely no standardization of sizes. We have found no less than seven different tables in as many catalogs, and very possibly there are still others.

In buying drawn gut the only satisfactory way is to ask for it by thousandths of an inch diameter rather than by such vague labels as X, 2X, 3X, etc. Then "mike" it yourself to be sure. It will pay you. Otherwise you are apt to find that the 4X you buy is the same as the 3X you already have, or maybe even coarser. Insist on measurement.

Incidentally, while we are on the subject of understandardized merchandise, this goes for lines as well.

One of the chief objections to Spanish Gut is its well known tendency to deteriorate, particularly when damp or when dyed. It is also adversely affected by the action of strong light and heat. This deterioration is utterly unpredictable, and no two lots behave in the same way. It is quite common to find some strands in a bunch becoming brittle and

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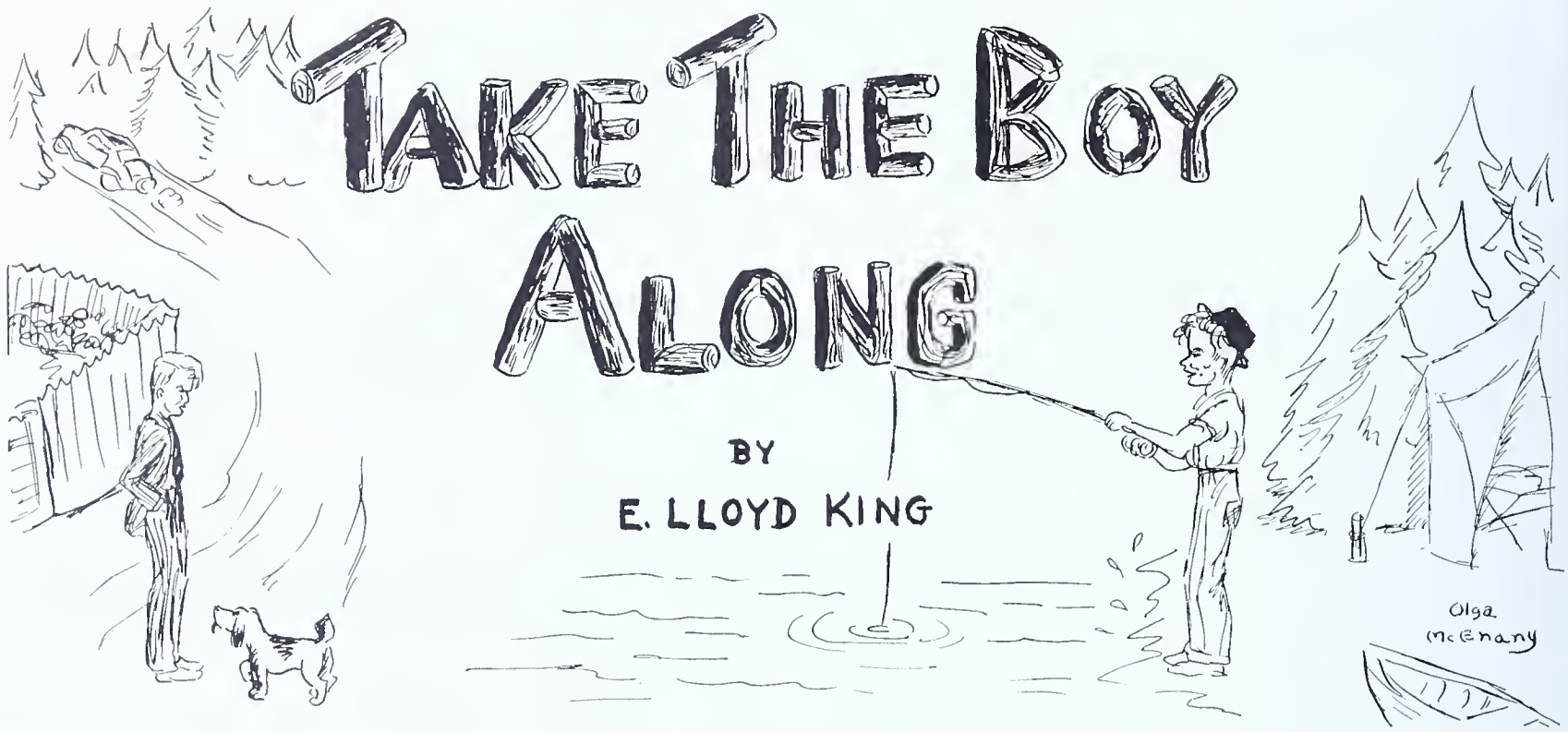


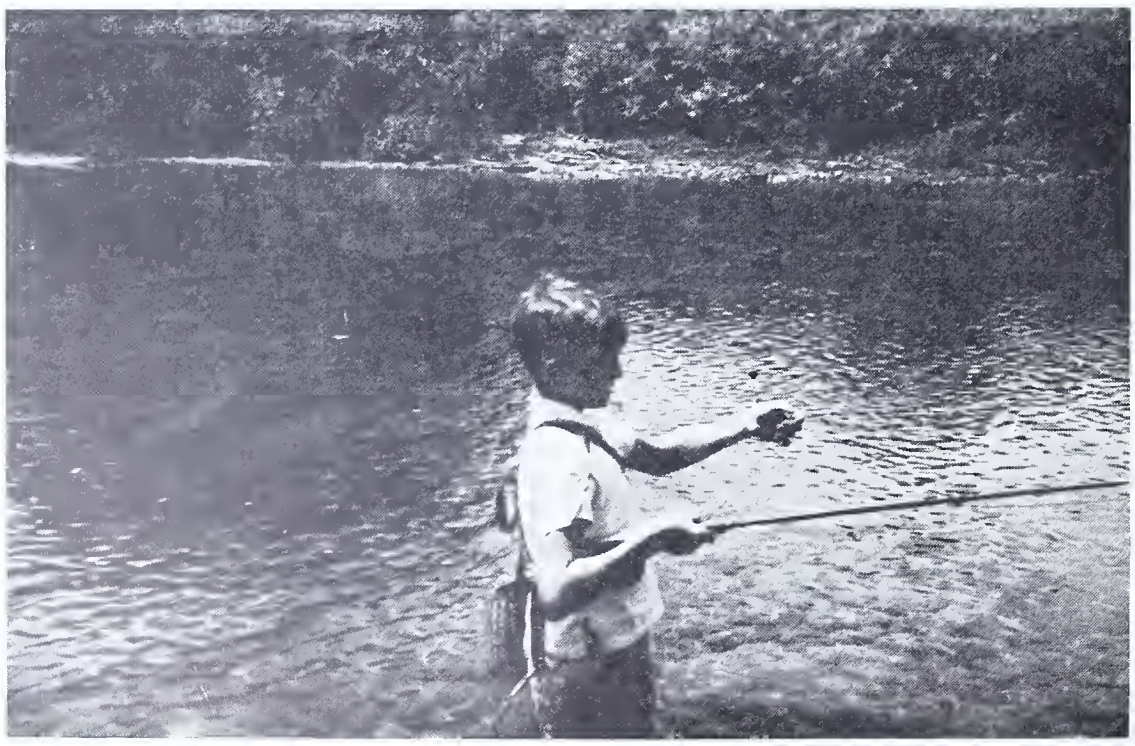
TAKE THE BOY ALONG

BY

E. LLOYD KING

THIS is the odyssey of a boy that was, the prayer of the boys who are, the entreaty of the boys yet to be. And, reader, should you become impatient—should it seem the writer wanders away from the theme to indulge a chain of commonplace personalities—the reminiscing is deliberate and with the thought of emphasizing how indelibly enduring many trivial incidents may be emblazoned upon the mind of tender years, the impressionable intellect of the very young. Later and more important adult adventures may become foggy with passing time, but the precious boyhood big moments usually linger until the last expiring breath. And perhaps all of that is much more important in the general scheme of things than many of us suspect, especially in moulding the man who is destined to be. Who can say—perhaps it is the fundamental plan of the Supreme Being?

But anyway the real purpose back of this yarn is a plan for the lad at home. Are you taking him along? If not, did you ever in the excitement of departure take the time to look into those eloquent questing eyes and try to fathom the message therein, a message for you alone? Did you ever stop to consider perhaps a brave little heart was at the point of breaking—aching to go along, but much too manly to beg? The spirit of the unknown, the desire for exploration and adventure, is doubly intensified in the very young. Besides you are the lad's one big hero, the swellest, wisest, best fisherman or hunter in the world. Other guys may be good all right, but now "Pop"—well there are none quite the equal of "Pop" in field or stream as viewed through the adoring eyes of a proud man child. Such loyalty invariably deserves a thousand fold more appreciation than that with which it is sometimes rewarded.



From the time he has been able to whip a rod, Clyde Fox, Jr., has been coached in the proper technique of fly fishing.

The love of fishing is a cherished heritage passed on to this writer by an understanding Dad, a Dad who was not too pre-occupied to share his pleasures and adventures with the boy. Billy King, of Gettysburg, was a sportsman, a conservationist and a lover of nature long before the full significance of such identification became generally accepted as an ideal by outdoor America. He was a fly fisherman, part time, way back in the gay nineties and never killed or maimed a fish, bird or beast unless there was need at home for food. And he took his boy along when the little fellow could only have been a big care and a blamed nuisance—that lad to become your correspondent. A family none too healthy; a job none too lucrative, old Dad never had much money, but his allowable pittance was cheerfully budgeted, share and share alike in the tackle purchases—and it would have been so easy to reserve all for personal use. Few people really understood Billy King; it was not quite seemly to the simple country folk that a man who worked six and one-half days each week should then go fishing *every* Saturday afternoon while neighbors were laboring. Who wanted to go fishing anyway? Some were not quite sure but that it wasn't downright shiftlessness. Few seemed to appreciate or care that while he toiled all day of a Sunday, other folks were free to enjoy relaxed leisure and follow personal whims as conscience and blue laws might dictate.

More than a Dad, he was the best pal a boy ever had; we were bound closer together in bonds of wholesome adventure than ever became possible with cherished companions before or since, not excluding those buddies of that cataclysm called the World War. His name for the lad was merely "Boy"—why no one ever knew; ofttimes and far more frequently than anyone might suspect, "Boy," long since grown to manhood, still hears that low, rich, friendly voice cautiously calling from the whispering hemlocks or vagrant zephyrs amid those lonely, secluded places once haunted as our own. And e'en to this day when I hear that voice calling, my head will jerk up to the alarm and aging eyes dart quickly out over the water, trying to pick up the swirl of the feeding lunker or

the tell-tale rings where a lesser bronze back had hit the surface. Only those who have lost such a Dad are privileged to understand. Those who have a son to share the outing are far more lucky than they'll ever know. It shall never be my privilege to watch my little boy cast a fly—God gave him to us and then took him right away again. But the little ten year old daughter is striving hard to be both boy and girl; a sturdy little southpaw she has been fishing since the tender age of two, took her first bass from the Juniata at four and now fishes dry flies for trout furiously, wading side by side with her mother or dad when depth permits.

Little of my fishing is now done in the old home county, Adams, but I still go back there to hunt, often I suspect for sentimental reasons—just for another look at old scenes. Almost every hole in Old Rock Creek recalls to memory a fighting big mouth, Elm Tree, Red Rock, White Rock, Benner's Pond, The Point and on and on. Over on Marsh Creek are Natural Dam and Harper's Hill. A few miles away Rock Creek joins Marsh Creek to form the upper Monocacy. But at White Rock is where the little barefoot shaver had his most exciting adventure in a long fishing life. Rock Creek no longer harbors the lunking bigmouths of thirty and more years ago and few fishermen of today are intimately acquainted with White Rock. The pond is perhaps a half mile long and rather deep; right about midway is the deepest spot and on one side of the creek bank a towering precipice. Along this precipice the biggest bass were wont to cruise, often only a few inches beneath the surface as is the custom with bigmouth. Wading in from the opposite shore it was not long before a ten to twelve year old would be immersed to the armpits, which was just about far enough for comfort. One day Dad and I were standing out there when he called "Look!" Right in front a big old largemouth was circling. Dad could have taken him easily, but he called for my line. Impaling a fresh grasshopper quickly, he tossed the hook toward the fish. Bass and grasshopper made contact somewhere enroute. Maybe that wasn't a predicament for a kid—up to the armpits in water, seemingly a long distance from shore and a thoroughly angry and excited bigmouth bass cutting up doodads on the end of the line. While Dad whooped with glee, I fought that old devil to a standstill—he took the line away and I hauled it right back, he kicked, twisted, jumped, sounded and smashed about until the shaking kid almost wished he wasn't hanging on. The uproar became so general that a bunch of farmers hauling wheat behind the precipice heard the commotion and rushed over to take a bird's eye view of proceedings. But the bass was hooked soundly and the leader strong; the battle eventually came to an end and the proudest boy in all Adams County that Saturday afternoon was too darn excited to get to shore with the fish without a little aid from an equally elated Dad.

Following the footsteps of a fishing dad. Clyde, Jr., 11 year old son of C. W. Fox, genial secretary of the Harrisburg Hunters' and Anglers' Association, tries his luck on a central Pennsylvania stream.

June Frances King, age 10, a southpaw and mighty serious about this thing called dry fly fishing—not to mention being rather proud of a rather nice Yellow Breeches brownie.

Benner's Pond produced the biggest bass ever my pleasure to see taken on rod and line. Fishing there early one July morning just as the sun began to dispel the smoking mists over the lily pads, Dad hooked and landed a twelve-incher on a tiny minnow. The shiner was pushed up the leader by the strike, badly hurt, but not yet dead. Jokingly Dad slid the mangled little minnow back onto the hook and tossed the line among the lilies. Hardly had the bait touched water than the line began to move slowly, slowly upstream. Striking hard, the following fifteen minutes' struggle yielded up a bigmouth measuring almost 22 inches in length at eventide that hot day, long after the fish was dead and had been carried home, afoot, some six miles in sultry dry air.

Harper's Hill and Natural Dam with the legend of buried treasure sent the cold chills of apprehension coursing up and down the youngster's spine. An awesome tale of hidden gold that may or may not have been true; certainly there was a lot of searching many years ago, but no report of anything ever having been found. Harper's Hill, barely north of the Mason and Dixon Line, is a glacial deposit dominating the surrounding plateau, rugged, rock studded, heavily wooded, and at that time almost as primeval as when the red man roamed the section many years before.

At the foot of the hill and nigh on to the bank of the creek reposed the ruins of an old still house. Nearby, still feebly trickling, were the distiller's two bramble choked springs, a favorite place with fishing parties. Legend had it that the distiller, heeding Father Abraham's call for a hundred thousand more, marched away to die on a Southern battlefield, some said in the Crater at Petersburg, others at Cold Harbor. Before leaving he was supposed to have called a trusty negro house servant, an old mammy, and together one dark misty night they buried a box of gold coins beside a triangular rock near the path to one of the springs. The mammy was pledged not to reveal the hiding place until her death if the soldier did not come back; in the box were to be directions for disposal of the fortune. How my father became possessed of the old mammy's supposed deathbed declaration I can not say, this part of the legend being of little import to a lad of tender years. Sometimes I think the end was supposed to have occurred in the vicinity of the old homestead, perhaps at a neighbor's, either a goodly number of miles from the old stillhouse. On the other hand the grandpater, a wartime member of a Pennsylvania volunteer regiment, one company largely recruited in the vicinity of Gettysburg, may have picked up the story from some old comrade at a veteran's reunion when the G. A. R.

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Making and Fishing the Cork Bass Bug

By W. R. WALTON

ANGLING doubtless is a sublimation of the hunting instinct of primitive man which survives more or less strongly in the breast of even the most timid of Casper Milquetoasts. That it is a sublimation or at least a refinement of that urge has been recognized for centuries.

Thus we find in the very first book printed in the English language (1496) on "Fysshynge With an Angle" that it is compared with the three other principal "dysports" of that age namely; "huntynge, hawkynge and foulynge." The author, said strangely enough to have been a religious named Juliana Berners, after enumerating the pains and drawbacks of the three lesser sports concludes that "the best to my symple discrecion is fysshynge, with a rodde and lyne and hoke. For if he (the angler) doth as this treatise teacheth and there be nought in the water, yet at least he hath his wholesome walk and merry, at his ease; a sweet air with the sweet savor of the meadow flowers, that maketh him hungry. He heareth the melodious harmony of the fowls (birds) which meseemeth is better than all the blasts of (hunting) horns and the cry of fowls that hunters, falconers and fowlers can make. And if the angler take fysshe" (mind the "if" even in the 15th century) "surely then is there no man merrier than he is in spirit."

Since that early day when the English language as we know it was but a hundred years old, Christopher Columbus was just concluding his second voyage to this newly discovered land, and every angler was compelled to make his own hooks, many refinements have developed in the art of angling. It was not until long after the game qualities of the American black bass had become famous, however, that the art of fishing for it with a floating bug was invented. The earlier American writers on angling knew nothing of this style of fishing. Frank Forester (1859), Genio C. Scott (1869) and even Dr. J. A. Henshaw in the first edition of his "Book of the Black Bass" (1881) all omit any mention of the use of any such lure as the floating artificial bug made of deer hair or cork as we know it.

Bug fishing possesses a peculiar charm which has only to be experienced to be understood. But this phase of fly rod fishing requires the exercise both of patience and self control to be successful.

Although bug casting will take fish from any clear pond or stream that contains them, it is especially adapted to such lakes, ponds or slow streams as are well supplied with water plants or similar cover under which the fish may lurk while watching the surface for the appearance of any edible creature upon it. The largemouth bass and the bream, or bluegill sunfish, afford great sport in this kind of fishing, and during July and early August in Pennsylvania and the neighboring states, the smallmouth bass frequently may be taken in this fashion. As a rule crappie of either kind do not rise to such lures but the chain pickerel is often taken in fall by floating lures.

Floating bugs in many forms are obtainable commercially ranging from those made entirely of bucktail hair to those having the body constructed of balsa wood, cork or hollow plastic tubes.

The bucktails have the advantage of being soft and yielding in the jaws of the fish and hence likely to hang him fast when he strikes. However, their fault is that after several casts they are likely to become more or less water-logged and they do not take the brilliant colors so well as bugs constructed of more solid materials. As a body material for the use of the lure butcher, none is so easily obtainable or workable as cork in the form of ordinary bottle stoppers. Such corks, of various sizes, serve admirably as the raw material for the bodies of floating bugs.

When bug fishing first came into vogue, most of the bugs sold by dealers consisted simply of such a cork unaltered but with a pair of feathers of various hues tied to its convex side and a hook set into a slot on the opposite one as shown in Figure 1. In fact such bugs are still offered for sale and under favorable conditions, they often take fish.

After fishermen began to realize how thrilling bug fishing could be, even with such imperfect lures and the demand increased for them, many kinds and types of bugs soon appeared on the market. Among these none has proved more durable or effective than that designated as the "popeye" and consisting essentially of a split bottle cork with the hook attached to its flat side and having a pair of rather large glass eyes mounted in its front end. (See figs. 5-7).

By the use of a few tools and materials, this style of bug is easily constructed by any handy angler. For body purposes cork stoppers of various sizes are required. The largest of these should be about 1 inch long by ⅞ inch in diameter at its larger end, for largemouth bass. For bluegills, corks not longer than ⅝ inches by ½ inch are about right.

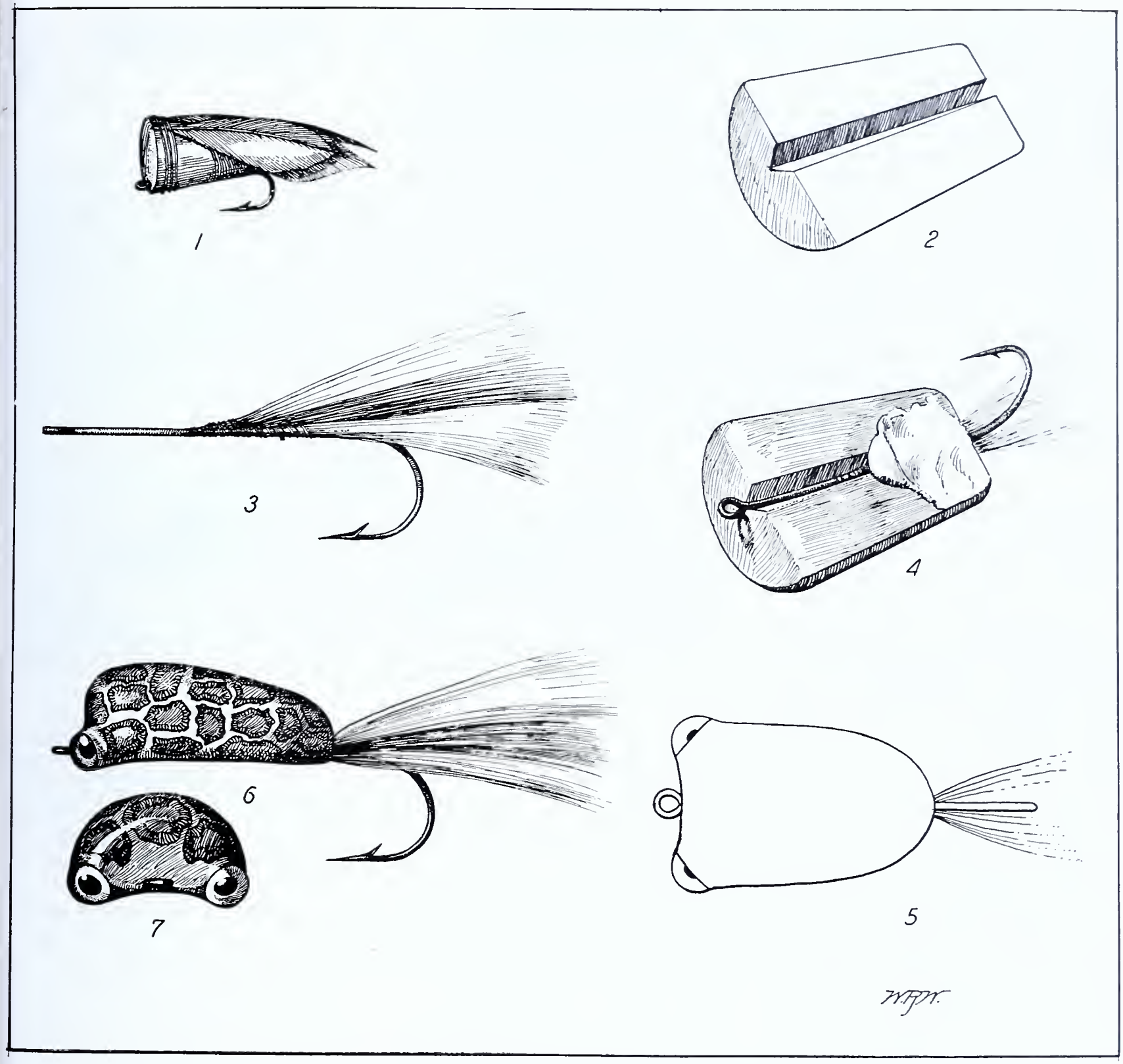
The first operation is to split the corks in equal parts through their long axis. For this purpose nothing excels a fine fretsaw but a sharp knife blade can be used. Smooth the flat side with fine sandpaper and cut in its exact center a "V" shaped groove as in figure 2.

The groove should be made considerably wider than the hook shank and deep enough to receive the hook with its attached tail. The extra space around the shank is required in order to allow the plastic wood, used as a cement and filler, surface enough to insure its gripping the cork firmly, as described presently.

The next step is to tie the tail in on the hook shank as a point beyond its middle but which will be covered by the cork body when finished, (Fig. 3). For tail material, either hackles or hair may be used but I prefer hair as the better material in several ways. I am also much in favor of the triple streak design for such tails. That is, white-red-white, yellow-black-yellow, or white-black-white, with the darker streak always in the center, as illustrated in the figures. But whatever the material used, this should be well tied in and cemented with waterproof cement as fish teeth have an astonishing way of tearing tails from lures. For this reason, too, plenty of plastic wood should be pressed in around the root of the tail when cementing in the hook as will be presently described. For the largest size cork bug I use a number 1, model perfect hook, having a 3X long shank. For the smallest size a number four, standard length hook of the same model is good.

To insert the hook and tail, the shank is placed in the groove with the bend toward the small end of the cork, and a dab of plastic wood is then pressed firmly over it with the end of the *wetted* thumb. Never attempt to handle this material with dry fingers as it is the stickiest of sticky stickers. The position of the hook is well shown in figure 4. Proceed to fill the groove and around the hook right up to the eye. It is well, in this operation, to allow the plastic to extend in a thin coat right up to the outside edge of the cork on each side, as this aids in firmly holding the hook in place under strain. After the hook is inserted, inspect it carefully to insure its being truly at right angles with the flat plane of the cork and then set the whole thing aside for 12 hours to allow it to harden completely. After this interval, the hook will be found rigidly attached to the cork body and the smoothing and finishing of it may proceed. Before attempting this, however, be sure to stick a piece of cork on the barb to protect you from accidentally imitating a striking fish; such wounds are painful as I well know. The finishing and smoothing of the body may be done with a fine wood-rasp and sandpaper but if you possess a small sanding disk as I do this is the mosquitoe's knuckles. The general form of the finished body should be similar to that shown in figures 5, 6 and 7. When this is finished the glass eyes may be inserted. A word about these seems desirable as, unless you happen to be a taxidermist, they may be an unknown quantity to you.

Glass eyes formerly were largely imported from Europe but now excellent eyes are made by American manufacturers. They come in pairs fused to a length of soft iron wire and there is a vast difference in the quality of such eyes. It pays to buy either direct from the maker or from a reliable taxidermist as eyes purchased from firms dealing in fly tying materials are often defective or poor in uniformity and quality. I prefer bird eyes having the pupils colored yellow but eyes having clear glass pupils are often used in cork bugs. These should



cost not more than 3 or 4 cents a pair, and for the largest bugs a number 5 bird eye is about right. For the smallest size bug a number 3 is the correct size. To insert the eyes, holes are bored in the cork to receive them. These should be somewhat larger than the eye so as to contain excess plastic wood which is used as a cement to retain them. To make these holes a hand drill may be used but a large size egg shaped dental bur of the kind used to work vulcanite is better.

When the cavities for the eyes have been drilled, the eyes are clipped from the wire leaving about a sixteenth of an inch of the wire attached. The cavity is then filled with plastic wood and the eye is pushed into it to the required depth. The excess plastic that exudes is cleared away immediately and smoothed snugly against the glass all around as shown in figure 6. It may be seen from the illustrations that the eyes are inserted at the lower corners of the head at an angle that causes them to penetrate the surface film when the bug is floating. This is done so as to render the eyes plainly visible to the fish from below (Fig.7) and has been found to be of considerable value.

In coloring these cork bugs, there is opportunity for the exercise of considerable imagination but combinations of red-white, red-yellow, black-white and brown-green have been found effective. The rather elaborate design illustrated imitates the markings of a leopard frog and is also a good one. The general ground is pale yellowish green and the spots are outlined in black and filled in with Van Dyke brown. Ordinary artist's tube oil paints mixed with spar varnish are used for the colors. Allow plenty of time for the paint to dry and then finish with two coats of spar varnish thinned with turpentine. The quick drying bakelite or phenolic varnishes widely used for household purposes are handy and convenient but they are also brittle and fail to stand up under hard use and sharp fish teeth. The pyroxylin lacquers have similar faults.

The technique of casting the cork bug is not difficult but both patience and self-control are requisites to success. It is essential that after the bug is cast it should float quietly and without drag if possible. For this reason a rather long, light leader is required. The leader should be greased to make it float as otherwise it will form a subsurface loop thus not only producing drag but preventing instant action in case a strike is registered. The lapse of time required in taking up the loop often is sufficient to permit the fish to reject the lure before it can be hung. For an eight-and-one-half foot rod, an eight foot leader is about right. In case a longer leader is used, this should be spliced smoothly to the line to permit it to travel through the guides without sticking—a difficulty that is sure to occur if a loop is left at the junction. The effective technique

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Simple Fly Fishing for Anyone

By MYRON E. SHOEMAKER

SO much has been written in the past few years about fly fishing it would seem that there is nothing left to encourage or convince the would-be fly fisherman that success can be secured with flies.

It seems that the majority of the fishermen want action when they go fishing—and this cannot be construed as a selfish attitude. The fly fisherman also likes action, and he usually gets it.

In order to get the action that the fishermen desire—actually catching some fish—there must be a sufficient supply of fish in the streams. To keep this supply of fish intact there must be an abundance of natural food for the fish. An army of fishermen such as we have in Pennsylvania cannot expect to continue catching fish unless they help in the general conservation program, and especially that of retaining and building up the natural food supply.

For many years the Board of Fish Commissioners have been raising and releasing fish for the fishermen to catch, and most of them have been caught on the live bait taken from the public streams by the fisherman or bait dealers. None of this natural food has been replaced by the fisherman or the bait dealer, and the Board has been forced to resort to a program of restocking the streams with food, as well as fish, to insure the future of Pennsylvania's fishing.

Fly fishing has been one conservation measure of conserving the natural food supply. Yet there is considerable misunderstanding about the effectiveness of flies during the day. Also of the so-called expensive equipment and "art" of fly casting.

Since night fishing with flies has become so popular in many parts of the state—and with excellent results—the theory has been that bass cannot be taken successfully during the day with flies. The fact that bass sometimes hit a fly just a few feet away at night seems so simple that many fishermen resort to night fly fishing because the results are obtained through an apparently simple method.

Excellent fly and spinner trolling combination.

The night fishermen use both surface and wet flies with good results, but are of the opinion that they cannot take any bass during the day. The result has been an overwhelming majority of live-bait fishermen during the day.

Just why the fishermen think that bass will not strike a fly during the day is hard to explain. It is an indisputable fact that more trout are caught during the day than at night and plenty of them are taken with flies. The bass are not any exception. They will strike a fly during the day!

In recent years the fly fishermen have increased, the conservationists have increased and the fishermen in general have multiplied far beyond anyone's expectations. This constant increase of fishermen means an added burden upon the supply of live bait. The extremely serious drought which prevailed in eastern Pennsylvania last year has had a serious effect upon the streams and the live bait supply. In view of this each fisherman should at once realize that he has a responsibility to assume and an obligation to fulfill to help protect the live bait supply.

You, Mr. Fisherman, can play a vital part in conserving nature's food supply for fish by careful methods while catching live bait; by using no more than is necessary for a day's fish; by using artificial lures exclusively.

A veteran conservationist who has recently been securing the reaction of fishermen to artificial lures and live bait told me that he would predict that within five years there would be a bill introduced in the Legislature prohibiting the use of live bait. His theory no doubt is good in conserving the natural food supply but as a practical movement it seems a little too severe. It is a hard task to force an objectionable piece of legislation upon the American public without giving them some even chance of enjoying wholesome recreation. Encouragement and the necessity of using artificial lures will secure quicker results than resorting to law enforcement in this matter. Most fishermen can be persuaded to new methods if the results can be obtained.

Before I attempt to reveal a simple and successful method for ANY fisherman to catch bass or other fish on flies, it is quite

Rod on seat and parallel with boat.

mperative that the annual toll of live bait be given some attention.

The June 1935 issue of the *Angler* carried an article by the writer entitled "Use Flies—Save Food For Bass." It seems that the high points of this article were impressive enough to be republished by *Field and Stream*. A few paragraphs of this article may again serve the intended purpose.

"It is a well established fact that the principal food supply of most of our so-called game fish are minnows. This is a factor which must be seriously considered concerning future fishing. Before the modern conveniences of travel there were many minnows in the small streams which eventually reached the larger streams where they were utilized by the fish for food as nature intended. The drought has had its serious effect on many of these small streams and the minnow life is practically extinct in many of them. The bait fisherman of today helps deplete the minnow life in these small streams as well as in the larger ones. No doubt he is innocent and unaware of just what he is doing and when he realizes the damage being done immediately turns to artificial lures.

"It has become necessary for the Board to propagate minnows and release them in many streams for a food supply so far as possible. Fish must have food and if the minnow life is not there they will make inroads upon other species of small fish for food.

"As an example of what takes place in our waters annually, let us consider some of the fish which are taken with live bait, trout, bass, wall-eyed pike, rock bass, pickerel and yellow perch. Live bait are used for some of these species more than they are for some of the others, nevertheless the annual toll mounts very high regardless of what species are fished for. The season runs from April 15th to November 30th, or a period of 32 weeks. One fisherman using but 50 live bait per week would use a total of 1600 during the season. With 150,000, less than half of our licensed fishermen, using the same amount of live bait, a season would total 240,000,000. If this amount of minnows could be released in the streams of the 67 counties, each county would receive a total of 3,582,098. In 1934 the Board released approximately 1,500,000 minnows to offset what the fishermen had taken out of the streams."

Since 1935 the increase in the number of fishermen has increased the toll of live bait taken from the streams and yet the fishermen have done practically nothing to restore any of the natural food supply which would make better fishing.

The fall fishing season is here again and live bait will be used more extensively than during the earlier part of the season. Most of the fishing will be confined to day fishing due to cooler nights. The bass, however, will strike a fly during the daytime in the fall just as well as during the warm weather.

Just as an example of the effectiveness of flies during the day may I reveal to you the experiences of a recent day fishing party consisting of 64 fishermen floating 15 miles down the North Branch of the Susquehanna River from 6 A. M. to 7 P. M. These sportsmen were not out to catch their limit of bass but to have a day of sport. This does not mean that they did not try to catch any bass. They tried and they tried hard. They were good fishermen. Sixty-two of them used live bait from start to finish. The writer used nothing but flies.

Actual trolling with fly and spinner.

My companion for the day had his supply of live bait but at the end of the trip had used but one live bait. He had found a new method which produced results without knowing the first rudiments of fly casting His live bait were dumped overboard to serve a better purpose.

The final results of the day's fish were 88 bass, six of which the writer took on flies while my companions added four more. In addition to the six which the writer retained—and then only to add to the total catch in the fishing contest of the party—there were 14 bass taken above the legal size which were returned to the water.

The theory that a fisherman must know just how to make a delicate cast in order to catch fish with a fly is just so much talk. Results can be obtained with the fly and spinner combination without knowing anything at all about casting a fly. Neither is it necessary to use the so-called expensive fly fishing equipment.

All that is necessary is a rod whether it be a fly rod, bait casting rod or steel rod usually used in bait fishing. The line may be any color, type, size or test. The reel may be anything the fisherman desires. The flies can be either the regular bass flies or of the streamer type and may range in size from number 8 hook to number two hook although the smaller flies seem to produce excellent results. The smaller flies are of the trout size. They may be made of bucktail or feathers. The color combination may be to the fisherman's liking. The leader can be any length the fisherman desires from three to ten feet in length and still produce results. The spinner should be either a number one or two and preferably a number one. It can be either nickel, brass, copper or gold plated. Personally I have always used the brass spinner because it is not as bright as the nickel nor as dull as the copper. It seems to be a happy medium. Anyway, results are obtained.

Any six year old boy can sit in the back of a boat and hold a rod and catch bass if fishing with someone who accompanies him.

To use the fly and spinner combination without the aid of a fly casting rod may sound a bit fantastic but if you will just let out from 35 to 40 feet of line, or more if desired, behind the boat and troll very slowly the results may be very surprising. You may troll upstream against the current, downstream, across the stream or any angle you desire. Swift water, shallow water, medium depth water or deep water should be covered. If in very deep water then a sinker heavy enough to take the lure nearer the bottom should be used and attached about 6 feet above the lure. No sinker is required in the shallower or swift water.

It is not necessary to stay in the middle of the stream or pond. Troll along the shores whether they be rocky or otherwise unless the bottom of the stream is mud.

It will be quite necessary to securely fasten the rod if you are fishing alone or rowing the boat for someone else and fishing yourself also. To fasten the rod, drive a small nail in the boat seat on either the right or left side of the boat. It only needs to be driven in far enough to make it secure. Then place the rod, with the reel handle up, on the boat seat so that the nail will be between the reel and the handle of the rod. With the handle of the reel entirely free there will be nothing to prevent a free pull of the line when the fish strikes the lure. Unless the rod is securely fastened you may lose the rod in the water due to the sudden strike and vicious pull of the fish when hooked.

When the fish strikes the lure you will know all about it. You may not feel the strike or see it but when the fish takes the lure and the hook strikes home there will be that familiar whirr!! of the reel that will make you think you have hooked the biggest bass in the river.

The rod should be placed parallel with the boat which will be less strain on the rod and the line will be tight all the time. If fishing with a companion he may, of course, hold his rod. I would not suggest the use of an expensive fly rod for this method of fishing because too much of it will place a set in the rod.

(Continued on Page 25)

Sum o' us fellers wuz talkin' erbout the fishin' down ter the store t'uther nite, an' most o' us figgered thet this hez bin a powerful funny seezun. Taik the trout, for instence. Rite erbout when grasshoppers gits goin' gude on most o' our runs an' cricks herebouts, along cums the most dratted big bunch o' locusts I reckin I ever seed. Them brownies in the big crick shure did go ter town on locusts an' sum o' the biggest fish wuz ketched on them. Heerd tell that locust yeres sumtimes does upset the troutin' an' durned ef I don't figger mebee they's sumpin in it. Hi Lucas ketched a most powerful big brownie down below the ol' log dam, 22 inches long an' hevy, wayin' jist a leetle short o' six pounds.

Erly in the bass seezun we dun fare gude, but nuthin' ter brag erbout. The fellers thet fished bate, minnies, catties an' helgermites, tuke sum gude fish, but the best bass I seen ketched wuz got on plugs. Sum o' our boys hez bin taikin' up fishin' with these here baby plugs, eround a quarter ter haff ounce an' they shure did go ter town with our crick bass. Josh Hanks ketched one thet wayed just a leetle shy o' 5 pounds, an' thet there fish erbout six o' us hev bin fishin' fer in the red rock hole fer nigh onter four years. Thing I notice is thet oncet the boys starts a-usin' them leetle plugs, they shure sware off live bate in a hurry. Not more'n a week back, a cuppel o' the boys wuz fishin' down back o' the mill in the big flat. They wuz usin' helgermites an' stonies an' hed onley ketched a cuppel flyer bass when along cums a feller usin' leetle plugs. Durned ef he didn't taik five bass, all better'n a foot long in erbout an hour, an' he onley kilt one thet wayed three pounds.

Seems like the best way fer us ter help our bass fishin' is ter taik up more o' this pluggin'. I bin notin' thet bass ketched on these here leetle plugs ain't hooked bad ginerally, an' a feller kin turn all he wants back inter the crick an' feel fair sartin thet they'll pull thru. Best part o' it is thet when plugs is used, live bate is bein' saved an' rite now, thet's our big consarn in this neck o' the woods.

Fish was regarded as a rare delicacy by the ancient Romans, some of whom paid as high as $1,200 for a single mullet.

Question: Here is a question that I would like to have answered in your next issue of the ANGLER. *After using a new torpedo line for five hours down here in the Susquehanna River among the coal dirt, etc., I find it necessary to have it cleaned or filtered before it is humanly possibly to use it again. What do you recommend to use in cleaning it?—H. S. G.*

Answer: Suggests R. W. McCafferty, "Assuming that your line is covered by ordinary dirt, coal dirt, etc., the best cleaner would be Ivory soap and lukewarm water. Stretch the line, preferably on a large lawn, wash and dry carefully using a soft cloth for both operations and be sure the line is perfectly dry before rewinding on reel. If the dirt is composed of oil and tar and line is of the oil impregnated process, white or leadless gasoline used sparingly will clean it. Use a soft cloth, cover index finger with it and dip in the gasoline, rub lightly the soiled portions and wipe dry immediately. If you had greased your line before using it in this dirty water, I doubt that ordinary dirt would have necessitated more than mere wiping of the line with Kleenex or soft cloth. However, oil and tar scum on the water is another story."

Question: Would you mention some good patterns of flies to be used in conjunction with a spinner in bass fishing?—J. R.

Answer: Pets with a number of bass fishermen who swear by the fly rod include the Royal Coachman, Montreal, Coachman, Yellow Sally, Red Ibis and Parmachene Belle. Hook sizes preferred are 2 and 4.

Question: Are pickerel propagated at the hatcheries of the Fish Commission?—H. E. G.

Answer: In our group of warm water game fishes, the eastern chain pickerel ranks as an outstanding cannibal. The Board of Fish Commissioners does not propagate this species artificially, owing in part to this tendency when the fish are held in limited pond areas, in part to the voracity with which it takes live forage, and finally because most pond space available is utilized in the production of wall-eyed pike and black bass of the two species. However, each year when some of the ponds are drawn down at the Pleasant Mount hatchery, a limited number of pickerel, usually ranging in length from 12 to 15 inches, are captured. These fish are then released in suitable waters.

Question: Regarding fly lines, what is the meaning as to the sizes indicated by letters such as HDH?—R. V.

Answer: The sizes of fly lines are designated by letters. An HDH double-tapered line, for example, means that such a line at the terminal points is an H size, much smaller in diameter than the D size designating the central section of the line. Level line sizes run backward on the alphabet, an F line, for instance, being much smaller in diameter than a C line. Proper weight in lines for fly fishing is most important in casting, and for best results, lines of suitable weight should be fiitted to the individual rod.

Question: Am interested in fishing for muskellunge in October. Could you suggest some waters for this fish in Pennsylvania? Also what are some good lures to use? —A. E. S.

Answer: Fishing for muskellunge, often termed tigers of the fresh water is somewhat limited. There are a few lakes and streams in northwestern Pennsylvania including Lake LeBoeuf, Canadohta Lake and Edinboro Lake, Erie county, French Creek, Crawford county, and Conneaut Lake in Crawford county where good muskies are to be taken each year. In fishing for muskies, some success is had in plug casting, but the old favorite method is to troll slowly with a large bait, usually a sucker from 10 to 14 inches in length. After the muskie has struck, considerable time must be given to permit it to masticate the lure, sometimes periods of from 20 minutes to half an hour or even longer being required. Record muskie on Pennsylvania records was a 59 pound fish taken in Conneaut Lake.

WALTONIANS STAGE SUCCESSFUL PICNIC

By DR. W. P. WALINCHUS, *Mahanoy City*

Members of the Izaak Walton League gathered at the Hutira farm picnic grove in Locust Valley. Refreshments were on hand with plenty to eat and drink for all present.

Most of the afternoon was taken up by the sharp shooters, shooting "Mo-Skeet-Mo," a new flying target game where all present took their turn to see what they could do in breaking those midget targets with .22 calibre shot.

Paul Tregellas was the champ for the day with 19 out of 25. Louis Britz was second best with 12 out of 25. Not bad for a beginner, Louie. You keep on practicing and then I might take you on providing you spot me some.

Some of the others who didn't do so bad either were Joe Clark, John Clark, Halka, Filcoski, Spencer, Lech, August and Sluzalis. Two Jims, Kirchner and Clark, found that there was too much room around the targets and both had perfect zero scores.

After the target shooting was over President Paul Tregellas called for the meeting

scheduled for the day. Order was called for and business of importance was transacted.

1. Purchase of additional wire for Izaak Walton League and Boy Scout Camp Blue Mountain Wildlife Sanctuary was approved.
2. Farmer to leave several rows of food out on sanctuary for winter feeding of wild life.
3. Annual game and feed shelter project on which details will be issued at a future date.
4. Stream improvement was discussed and tabled for the time being.

Mr. Spencer, who is our new county game warden, was on hand. He had just arrived in our county the day before and we were very fortunate to have him with us. He gave a nice talk on cooperation of warden and sportsmen and promised all the cooperation possible. Hope you will like your work in our county, Mr. Spencer. Good luck.

Fish Warden Lech talked on stream improvement and what dividends we have received from the work we accomplished last year in the lower end of Locust Valley Creek.

Members present were Paul Tregallas, Dr. Walinchus, Louis Britz, Peter Kubert, Prof. Sluzalis, Ski August, Joe Clark, Barber Shober, Stan Setcavage, Jim Clark, Joe Halka, John Clark, William Gately and Thomas Clark.

Guests present: James Kirchner, Wardens Filcoski, Lech and Spencer, and Mr. Hutira, our good farmer friend.

CHILDREN'S PROJECT IN DELAWARE OPENS

The Glen Providence Junior Fishing Project for children up to 16 years of age, opened on July 3, with a registration of 50.

This project is sponsored by the Delaware County Park and Recreation Board as a part of its county wide recreational program.

A well organized program will be conducted through the cooperation of the Delaware County Chapter of the Izaak Walton League of America. Philip G. Platt, Secretary of the Pennsylvania delegation and Vice President of the National organization, has cooperated in formulating plans for the project.

Fishing will be allowed every Wednesday and Saturday between the hours of twelve and six. Each child must register at the guard office before fishing. A catch limit has been set per day, (5) five sunfish and (1) one bass. Tags will be given to each child upon registration and must be worn while fishing.

The Park Board has set up rules and regulations which must be followed or fishing privileges will be suspended for a period of two weeks.

The Delaware County Chapter of the Izaak Walton League of America will cooperate by giving instructions to the youngsters who are fishing.

For further information write or call the Delaware County Park and Recreation Board, Court House, Media.

RAIN FAILS TO HALT MONTGOMERY RALLY

Despite intermittent showers on August 17, a large crowd visited the Montgomery County Park at Green Lane, Pa., for the Second Annual Clam Bake of the Montgomery County Federation of Sportsmen's Clubs. Between short periods of light rainfall, many of the participants sat in their cars, while others, amidst jokes and extremely contagious laughter, constructed primitive shelters by using a number of the picnic tables on the Park grounds. At the end of the day, the Federation's Clam Bake Committee reported that almost all of the 500 bakes ordered for the occasion had been sold.

Members of the Montgomery County Fish and Game Protective Association and the Lower Merion Rod and Gun Club, aided by the Sea Scouts, as they helped Warden Harry Z. Cole to take tadpoles and small fish from the French Pond to the Skippack Creek. This photo was taken just above Kaiser's Dam on the Skippack by Mrs. Ellen A. Deitrich, secretary of the Lower Merion Club.

Credit is due the Clam Bake Committee for its excellent work on arranging the details for this affair. The Committee was composed of the following: Chairman, John Ruth of Kulpsville, from the Lansdale Sportsmen's Club; Frank Clamer of Collegeville and Howard Shallcross of Graterford, both from the Perkiomen Valley Sportsmen's Association; Irvin Clemens and Merle Flemming of Royersford, both from the Royersford Hunting and Fishing Association; Charles Hughes and George Sinclair of Norristown, both from the Montgomery County Fish and Game Protective Association; and William Stoneback of Colmar, president of the Federation.

Prizes were awarded to the following for having sold the largest number of clam bake tickets: First prize—Charles Hughes of Norristown; second prize—Joseph P. White of Narberth, from the Lower Merion Rod and Gun Club; and third prize—George Sinclair of Norristown.

In the late afternoon, the Weather Man also kept his umbrella up long enough to permit the staging of two Clam Shell races—one for men and one for women. Mrs. Harold Kline of Green Lane and Mrs. Walter P. Miesen of Narberth were the winners of the Clam Shell Race prizes for women. Prizes in the Clam Shell Race for men were won by John Monastero of Philadelphia, John Ruth of Kulpsville, Clarence Smoll, Harold Kline and "Doc" Schell, all of Green Lane.

At a recent meeting of the Game Committee of the Federation, the chairman of this committee, Russell Krupp of Schwenksville, from the Perkiomen Valley Sportsmen's Association, reported the Pennsylvania Game Commission had just provided the Federation with 500 six-week-old pheasants from the Loyal Sock Game Farm and 80 six-weeks-old quail from the Fisher State Game Farm.

The Ways and Means Committee of the Federation wishes to take this opportunity to express appreciation to Russel Pyle and to Irvin Clemens of Royersford for having been hosts to this committee upon the occasion of its last meeting, held at Russel Pyle's bungalow in Lake View Park, Royersford.

In the foreground, a Sea Scout, doffing his boots at the end of a day's work of removing small fish and tadpoles from the French Pond to the Skippack Creek. Harry Z. Cole, warden, rear left, hands the last can of tadpoles and fingerlings to Howell I. Dietrich of the Lower Merion Rod and Gun Club.

CONCERNING CARP

Environment Appears to Be a Determining Factor in the Status of This Species

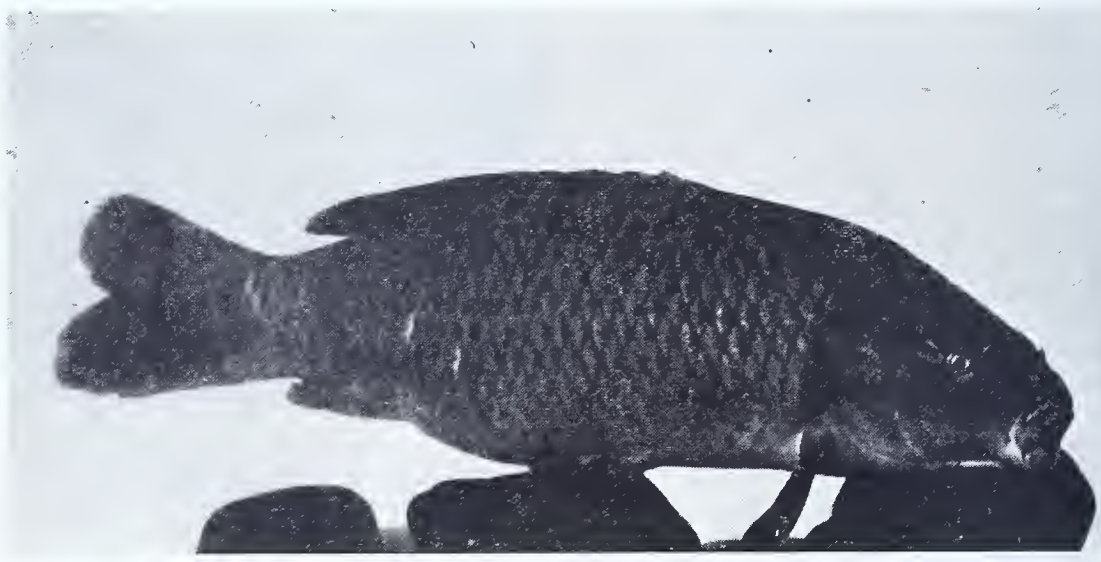
By ALEX P. SWEIGART

BACK in the '70's a new fish craze swept over the country. Prior to that time, in Europe, particularly Bavaria and the south central countries, carp raising had risen to the status of an important industry. The success that had been attained in culture of this fish in ponds created widespread interest here, not only in fisheries' circles but in the agricultural field. An inevitable result was the bringing of the carp to the United States. Farmers visualized an additional source of income through carp ponds, and, while no definite date is listed as to the time it first made its appearance in Pennsylvania, an approximate date mentioned is 1879. Ten years later, with the disastrous June flood of '89, many of these ponds were broken out, the fish escaping into a number of streams.

In common with other introduced species of fish life, the increase in number of carp since that time has been amazing. Today it constitutes a real problem in many of our waters, but in all fairness, let it be said that the type of water in which it occurs is a major factor in determining its desirability. In rapidly flowing rock ledge and rock bottom streams, its abundance seems to have but slight effect upon the welfare of more desirable species of fish lfie. In mud bottom lakes, ponds and dams, on the other hand, it may be said to be definitely undesirable. Rooting about in vegetation in these ponds, it causes an almost unceasing state of turbidity that may tend to exclude light from the vegetation with resultant harmful effect to the available forage in such areas. That point listed, and it is a major fault with the species, it is well to consider other tendencies, particularly as they have been noted in some of our best bass waters. Regarding its effect on bass, pickerel and wall-eyed pike, our outstanding warm water stream game fishes in Pennsylvania, the following factors are to be considered: (1) Competition with these and other species for the available food supply; (2) Destructiveness to vegetation and forage; (3) Availability of its young as game fish forage and (4) Its status as the destroyer of the spawn of other species.

Competition for the Food Supply

Carp found in our waters are of three types: the scale carp, with regular concentrically arranged scales; the mirror carp, usually easily identified by three or four rows of exceptionally large scales running along the sides of the body, the rest of the body being bare, and the leather carp or leatherback which may have on the back only a few scales and frequently has none at all. Examination of the contents of a number of carp stomachs, supplied to us by Peter Patricoski of Mount Carmel, revealed a mixture of aquatic insect larva, some vegetation which probably had been absorbed by the fish in its rooting about for food, worms and crustaceans. This type of fresh water forage is to be regarded as highly important to forage and game fishes and certainly a more intensive study of carp feeding tendencies would be worthwhile. There is a possibility that higher crustaceans, such as the crayfish so vital to our bass supply, may comprise an item in its diet, as reports indicate that carp are sometimes taken on crayfish by fishermen.



The scale carp is capable of a dogged, stubborn battle.

In our waters, the most active feeding season for these fish appears to be during the months of May, June, July and August. Apparently higher water temperatures are conducive to greater activity with the species. During the winter months carp enter a kind of sleep, the duration of this inactivity seemingly being regulated by the severity of and the early or late setting in of the winter. In preparing for hibernation a cavity known as a "kettle" is formed in the muddy bottom and here, frequently, large groups of the fish may huddle in circles their heads close together and the rear portions of the body raised and held motionless. From the time of the first heavy frosts, with attendant lowering of water temperatures until warming of the water in the spring of the year, it is believed they do not take any food. Strangely enough, it has been found in Europe, where carp culture is being carried on today on an advanced scale, that the fish do not diminish in weight while in the winter sleep in their natural environment. In man-made tanks or wintering quarters, however, they do so to a remarkable extent. During the period of inactivity, it has been found that the carp does not grow. Generally speaking, in our waters, the carp seems to favor more stagnant sections and back waters. However, in recent years in central Pennsylvania streams, considerable activity has been noted in shallows and even occasionally on the riffles.

This big scale carp gave Anthony Boxer of Shenandoah a terrific battle before it was landed

Off hand, it appears that, insofar as active competition in foraging with other species is concerned, this competition is chiefly with bottom feeders such as the sucker and mullet. Extremely low water prevailing in recent years in most streams has resulted in an abundance of aquatic vegetation, a condition definitely favorable to carp increase.

Destructiveness to Vegetation

In this respect, the carp is perhaps most harmful. Its tendency to create a roiled condition in mud bottom ponds preventing proper infiltration of light rays to the bottom has already been noted. Furthermore, upon emerging from the hibernation period, it

seeks hungrily for seeds of many of our most beneficial water plants, and in this manner, in localities where it is too abundant, may do considerable damage to vegetation such as the Tuscarora rice or Indian rice. On the whole, however, with the number of carp in most rock bottom bass streams being reduced by a constantly increasing army of carp fishermen, there is small reason to believe that this fish will ever become a serious threat to vegetation. Lake Pymatuning in Mercer County, formed in recent years, is today literally swarming with carp in some sections. It is to be noted, however, that ideal conditions for carp increase prevail there with the rotting of vegetation in the areas flooded. Perhaps in later cycles, the carp population will be definitely thinned down in the lake, another item of interest for study.

Frequently, when low water prevails, a school of large carp may, during their feeding period, cause a roily condition in a stream. Often nocturnal in their feeding, they also seem active extremely early in the morning. Streams in which this roily condition has been observed in recent years include the Susquehanna River in the vicinity of Harrisburg, the Juniata River, Raystown Branch of the Juniata River and the Conodoguinet Creek in Cumberland County. Generally, it was observed, however, that this murkiness had passed off by about 10 in the morning, hence may be regarded as only temporary in its effect. Apparently, the fish has adapted itself to waters having a rocky and ledge type bottom as well as to mud bottom water areas.

Young Carp As Forage

Spawning time for the carp in Pennsylvania comes usually in late May or early June, and may extend in some waters through August. In passing, this fish had its origin in Asia and is a member of the great family embracing the minnows. Perhaps no fish offers a more interesting study than does the carp at spawning time.

Attended usually by from three to six male fish, the much larger female darts swiftly about in short, tremulous rushes close to the surface, the male fish following closely. As the female releases her eggs, the attending male fish fertilize them and the eggs, adhesive by nature, frequently cling to surrounding vegetation. At this time of the year, the male, in common with most of the members of the minnow family, develops wart-like protuberances on the head and back which disappear when spawning has been ended. Spawning takes place usually in very shallow water and weedy coves. After the eggs have been fertilized and deposited, the adult fish seem to make no attempt to protect spawn or young.

Larry Prier, John Frank and Tony Lech with a catch of carp taken on the Lower Susquehanna.

Proof enough that the Lower Susquehanna yields catches of giant carp.

Frequently during recent years we have heard many carp fishermen remark the obvious scarcity of small carp, that is, fish of one-half to two pounds weight, in most waters. There is some reason to believe that this scarcity may be traced to the activity of other species. Many of our forage fishes such as the silver shiner frequent shallow areas along the shorelines in which carp eggs are deposited. These active little fishes, seeking their food in schools, undoubtedly destroy great quantities of carp eggs annually.

When the carp eggs hatch, usually in from 12 to 16 days, the baby fish break from the shell with a yolk sac attached upon which they may subsist from 4 to 6 days. While absorbing the yolk, they are helpless little creatures, and then it is that great inroads are made on them by shore feeding fishes such as the sunfish as well as minnows.

Under favorable food conditions, prevailing in most Pennsylvania waters for this species, their growth for a short period after absorption of the yolk is not extremely rapid. In the early stages of their growth, it is believed that these young fish, sometimes referred to as "carp minnows," provide a most suitable source of food for the rapidly growing young of the pickerel, smallmouth and largemouth bass.

Nature apparently intended that a heavy toll be taken from the eggs and young of this species, for the female carp is very fecund frequently depositing from 750,000 to 1,000,000 eggs. Just how game fishes in carp waters may affect the rate of increase of the species is set forth in a most interesting manner by Rudolph Hessell in a paper written during the '70's when carp introduction to American waters was being considered.

"Pike (males) are frequently put into carp ponds of Europe, one pike being added to twenty-five or thirty of the former. This is an old practice, which has been proved of great use by experience, assisting through the effects exercised in the improvement of culture; that is the favorable progress of the fishes. The introduction of the pike is practiced for two reasons: (1) That the carp may not constantly remain in the same feeding place, but, frightened away by the pike, may visit others also; (2) It is done, and principally so, to prevent the more mature carp from spawning. Should the spawning occur, as is the case occasionally, the young fry will be devoured by the pike, which otherwise would have deprived the large carps of their food. Great care is required in the introduction of the pike; specimens of minor sizes than that of the carp must be selected. The growth of the pike being much more rapid than that of the carp (three hundred per cent per annum), the former should be younger by one year at least than the latter, so that it may not prove dangerous to the carp."

It is interesting to note in this connection that the carp is one of our longest lived fresh water fishes, a factor that may have bearing on its comparatively slow growth. At any rate, some idea is to be had of the intensive study to which carp culture has been subjected by the foregoing paragraph from Hessell's paper. When we consider present day conditions in Pennsylvania fishing waters, with constantly increasing stocking of such predaceous fishes as the black bass, a question comes to mind as to whether there is ever much likelihood of the introduced carp attaining abundance sufficient in most streams to cause it to rank as a menace to other popular species of fish life.

Are Carp Spawn-Destroyers?

If afforded sufficient opportunity, carp as well as other bottom feeders probably would not hesitate to destroy spawn. However, one accusation to which the carp has been subjected in recent years, its supposed tendency to destroy spawn of other species of fish life is believed to have little background in fact. Perhaps the most timid fish of the inland waters, carp, despite the large size which they occasionally attain, generally give other species a wide berth. The habits of the sunfish family, which includes the smallmouth and largemouth bass, in protecting nests and young are well known; since the other popular warm water game species, the pickerel and walleyed pike, spawn usually before the carp becomes active in the spring, the latter constitutes virtually no threat to the unprotected eggs and young of these fishes. On the other hand, the rapidly growing pickerel and baby wall-eyed pike undoubt-

(Continued on Page 20)

A MEMORABLE BASS OPENING

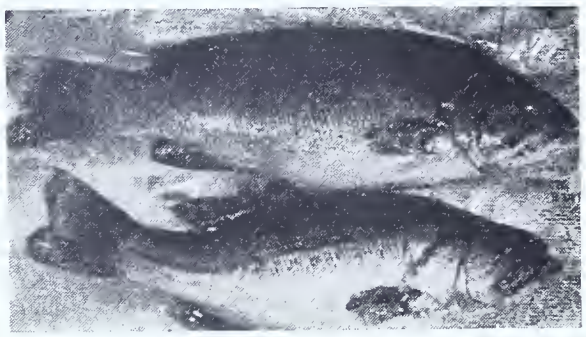
By J. B. KELL

TO any bass fisherman who spends his winter months going over the stock used in his trade, plugs, reels, rod, line, etc., the climax to those long evenings of love's labor not lost is the dawn of that fateful first of July. In the author's case, it was not only the dawn of another bass season, but was also an initial attempt at an entirely new type of bass fishing, both in the type of equipment to be used and the kind of water to be fished. Having done all my fishing in the western part of the State in reservoirs closed to fishing except from points of vantage along public roads, it was with a great deal of enthusiasm that I contemplated a day's fishing in open waters where "No trespassing" signs are few and far between and lurking constables enforcing that law are unknown. The second item of interest was the acquisition of a 6 foot bamboo casting rod with a 9 pound test line and an assortment of plugs which according to the advices of several newly met fishing companions were an absolute necessity and "would take fish where nothing else would."

Having acquired the above mentioned articles by devious ways and means (all fishermen are trusting souls) I found myself on the last evening in June, high in the ridges of Perry County at the camp of a companion who had filled me with tell-tales of the mighty bass that lurked in some of our central Pennsylvania streams just waiting to smash a plug on the opening morning. I arrived late and was greeted by the two other members of our party of three who were to initiate me into the sacred mysteries of taking creek bass on plugs. After being soundly berated for being late, they assisted me in unloading my tackle and we retired to the comfortable screened-in porch to discourse upon what the morrow might bring and to plan a course of action. As per usual it was long after midnight when things did settle down, the table set for a quick breakfast and everything put in readiness for an early getaway.

The dawn of the big day was perfect. We were an hour late arising and confusion supreme was the result. After a hasty breakfast that would have caused a dose of indigestion any day but that day, we piled ourselves into my host's car, waders, tackle and all and set out for our first stop on Sherman's Creek. After traveling approximately ten miles from camp, we arrived at one of those stretches of water that has bass and pickerel spelled out all over it. Nev Sherlock and I, being a little less excitable than our good host, Sweigart, were all ready to fish from the word go, when one of those things that happen to excitable fishermen cropped up. It so developed that our good host had forgotten his rod. Well, the curtain of charity may be drawn over the ensuing five minutes. Pine needles, scorched to a crisp, rattled down from the tall evergreens surrounding that particular stretch of water, a blue haze, similar to that surrounding a bolt of lightning, was thought to be visible and crackling expletives permeated the atmosphere.

A cloud of dust marked the departure of our host in quest of his forgotten equipment.



A brace of honies, a smallmouth top, bigmouth below.

My first venture into creek water brought a surpise all its own. The particular flat which we had elected to fish was approximately 100 feet wide and averaged two to five feet in depth with pockets here and there that were to be the target for our plugs. Having been accustomed to merely casting anywhere in our western Pennsylvania reservoirs it was interesting to try to place a plug in a small pocket in among the rocks and ledges anywhere from 20 to 100 feet away.

My attempts during the first hour wouldn't have won any accuracy events. Cast after cast missed the mark by wide margins and several times Nev shouted, "You don't find these bass in trees. They live in water." A full hour's fishing brought no results for any of us, and it was suggested that we move on with hearty seconds from the other members of the party. Our next stop was for a good old fashioned meal of bacon and eggs served up in the real old Perry County style. From there it was over hill and dale through some very beautiful country to Juniata County and Tuscarora Creek. This stream, I learned as we rode along, was the pet of both Nev and Alex and we were hoping that it would be in shape for fishing—and it was. Our first stop was a flat that certainly had a pickerel look to it. Nev and Alex immediately started up and down stream respectively and left me to go it alone. I guess they thought there was no use trying to teach a tyro the art of pickerel fishing. A half hour, however, brought no results and Nev and I finally got together to compare notes and decide just what we should do. So far we had no score and things didn't look too promising. We decided to start at the head of the flat and systematically plug it through, keeping about 40 feet apart. Still no results. By this time Alex hit the head of the flat and proceeded to start down through some water that we had so thoroughly covered. His third cast brought forth a yell that moved me in a hurry.

Water with that bassy look.

"Tied into one, and he's a good one." A glance disclosed his rod bent into an arc and his line cutting through the water at a great clip.

"Hang to him," I shouted as I floundered through the dense growth of underwater vegetation to reach him should he need help in netting the fish. Tuscarora pickerel have a trait all their own as I promptly discovered. They break water like bass and can give a fisherman an anxious few minutes especially since they are generally caught in weedy flats.

In this case a little expert angling did the job. Alex had the fish coming but soon discovered that he was too long to net and that didn't help the situation any. He finally led him into the shallow water along the bank and held up a beautifully marked chain pickerel of 23 inches. Nev and I still claim credit for aggravating that fish sufficiently that he took Alex's plug.

The next move took us into the lower reaches of the Tuscarora and there the fun really began. Our host seemed bent on retaliation for our none too complimentary remarks concerning a fisherman who would forget his rod, and he proceeded to show us up with a vengeance. The ensuing hour resulted in his netting and releasing five bass. Nev and I had gone scoreless with the exception of several flyers (bass under one foot) which we had carefully released.

"If you fellows just used a better acting plug, you might catch fish," Alex would say as he would release a bass. "The proper plug will produce results."

We had to admit that we had it coming, but we hoped that the evening fishing would even things up.

To complete the day, we had in mind a certain stretch of rather deep water which we felt should harbor a few bass. Several hours before dusk saw us stationed and ready for action and action we got. A bass of approximately two pounds smacked my plug and advice from the pals started pouring around my ears like rain. "Raise your rod tip, give him line, take the click off your reel. Who in the devil ever heard of playing a fish with the click on? Such confounded fishing is a disgrace to the plug fishermen at large."

For several minutes I didn't know whether I had the fish or the fish had me. Nev's advice came in stentorian tones from 100 yards down the stream. Into the other ear rolled conflicting advice from Alex and between the two, I stood trying in my own feeble little way to land my first good bass of the day. When it was finally all over and that scrappy 14" smallmouth was safely in the net

to be measured and its weight estimated, I knew that everything I had been told concerning the scrappiness of these little bronzebacks approximated the truth—and truth in fishermen is a mighty scarce article—at least most of the time.

Nev and Alex decided to requisition a boat for the last hour of fishing, so off they went, leaving me in the middle of some of the finest looking water I've ever seen on a bass stream anywhere. So tying on a semi-surface plug I went to work. In short order I had hooked and released three bass around a foot long. It seemed that the plug scarcely had time to reach the water before they smacked it and if there is anything that beats taking bass when they're in a striking mood, I have yet to discover it. These fellows meant business and on the type of light tackle I was using, every strike was distinctly telegraphed the full length of that sensitive bamboo rod. A full day's limit found its way to my net in that last hour. All finely shaped fish, well fed and in wonderful condition. All were released since I had only one idea in mind, and that was to take one of the really big old boys that were reputed to hang out in the particular stretch of water I was fishing. However, it wasn't to be on that particular evening.

Nev and Alex in the meantime were covering the shorelines very efficiently from their boat. I retired to the bank for a smoke, and watched them fish up through a particularly weedy stretch of water. Cast after cast sailed out to hit the water within a few feet of the shoreline. Every cast was well placed and the expected suddenly happened. Nev's plug landed beside an attractive weed bed and there was a powerful boil as the plug disappeared, and the fun began. Again the outpourings of advice, but this fish wasn't any flyer. "It's a wall-eye," Nev shouted as he caught a glimpse of the fish, "and a big one."

Approximately one minute later Nev said, "Well, fellows, there's one wall-eye that won't be taken out of here so easily." Two powerful surges into a weed bed and Nev's prize was free to test another angler's skill.

The writer with a two and three quarters pound smallmouth taken on light lure.

Light lures work well in spots like this.

That was evidently to be the climax of a wonderful day. The boat was returned to its owner and as we trudged up the road toward the car, a review of the day's catch disclosed a total of 18 fish, 16 smallmouth bass and two pickerel. Of this number of fish caught we killed the two pickerel and two of the largest bass. The balance was returned to the water for "seed" as we put it.

It was certainly good to sit down on a soft seat and go back over the day's activity. A lot of good natured ribbing was indulged in. Alex falling in the creek, waders, clothes and all and his subsequent decoration of the trees along the stream with his various articles of clothing, proved quite amusing. Nev's leaving an extra reel lay along the stream in the excitement of hooking his first bass of the year.

All these things were rehashed, and served to pep up our tired bodies. A quick dash back to camp and a good meal of steak and potatoes further assisted in dispensing that tired feeling.

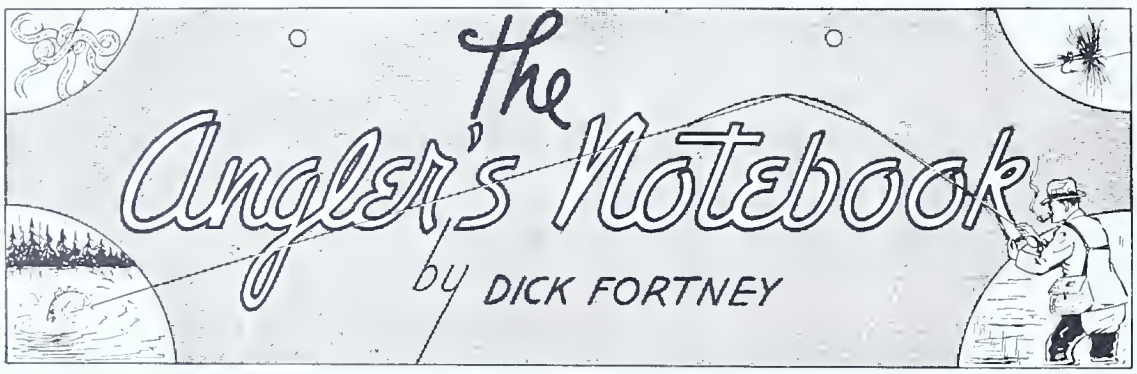
"Well, Jim," said Alex, over our third cup of coffee, "you've seen what we have to offer in the way of bass fishing—how do you think you'll like it.?"

"Alex," I replied, "this is the first day's bass fishing I've ever had in my life where the waters were free and open to all who cared to fish them, and it's the first opening day for five years that I haven't had to watch out for a constable or a caretaker. Bass fishermen in Westmoreland County would give anything for fishing like I've enjoyed today."

I have had many days of fishing with my newly made friends in our Central Pennsylvania streams but I don't think any one of them will compare with the first day of this year to my mind. I learned that to take bass under a foot is in violation of the code of ethics strictly adhered to by the local plugging fraternity. They are attempting to promote the use of plugs in order that bass food may be conserved. (And when you have seen live bait fishermen combing riffles with rakes and seines as I have seen it, there can only be one end).

All in all, the future of our bass fishing rests upon the shoulders of such fellows as

(Continued on Page 17)



LATE season fishing usually is better in the middle of the day and until about 4 o'clock in the afternoon. In summer fish go into hiding during the hottest part of the day, but later they are active during this same period because it is warmer then.

You must troll deep for wall-eyed pike or pickerel. The wall-eye in particular likes a slow-moving bait and one that darts and twists. So when fishing for it turn the boat or canoe at times, giving the spoon or minnow a peculiar turn in the water.

Larger casting or trolling spinners used in autumn fishing for pike and muskies must be moved much faster than the smaller lures, in order to develop effective flash action.

Shiners and clubs are probably the best bait for wall-eyed pike. Hook them through the back, just under the back fin, or through both lips, and allow them to move freely about in the water.

If bass fishing is poor with a three-foot leader, try a longer one. Bass are not as shy as trout, as all anglers know, but they are not dumb by any means. Some experts fish for bass with leaders as long as 9 to 12 feet, tapered but of heavier gut than trout leaders.

The less one investigates the mechanism of a reel the better service it will give. If one does take the reel apart, a screw-driver should be used which is adapted to that particular purpose.

Pork rinds or chunks, when used in casting for bass, should be "scooted" into the water rather than banged in, and the lure should be kept moving. To "scoot" the lure, stop the reel just before it hits the water and tilt the rod upward. The lure will slip into the water just as easily as if it were placed there by hand.

Feather or bucktail minnows are food-type lures, imitating the actions of live minnows. In black bass streams these lures are successful when fished with fine leaders, five or six feet long, of about eight or ten pounds test. Cast across and down stream, retrieving swiftly.

Wall-eyed pike habitually travel in schools and live in sections of the water where the bottom is studded with rocks and gravel. The wall-eye sees well at night, which is its favorite feeding time.

A boat fisherman doesn't wish to bother with a tape or a rule, so he can stick a piece of half-inch adhesive tape across the top of his tackle box; divide it into inch marks with waterproof black ink, and give it two coats of white shellac to protect it from the weather and wear.

Good rules when fly fishing for black bass: On narrow streams keep entirely out of sight, and on large waters make long casts. In either case the bass, not seeing the fisherman, will not be alarmed at the flashing of the rod and motions of the angler.

A level line of C, D, or E size is far superior to the regulation tapered line when casting bass bugs with the fly rod, the size of the line depending, of course, upon the strength and the weight of the rod.

In retrieving a bass lure, the rod should be pointed almost directly at the lure, for bass strike as the bait moves through the water, and when held in this position the rod is ready for a "strike" that sets the hook. The strike should bring the rod upward to an angle of about 45 degrees, and the rod can be held in this position while the bass is being brought to the net.

Professor Stumpff of Hegins with two fine smallmouth bass taken in Tuscarora Creek on stone catfish. The larger smallmouth measured 16 inches.

Swivels are the secret of successful trolling. At least two should be used, for they keep the line from twisting and kinking.

Jet black casting lures seen against the sky and observed from below the water are more conspicuous than those colored red, blue, white or green. Black lures attract bass.

A fly fisherman who has flies tied on hooks with turned-down eyes may find that they do not ride well with a spinner. The hook-eye can be straightened by heating it over a flame, bending it carefully with pliers, dipping it in oil, and permitting it to cool on a window sill with the window slightly raised to admit a draft of air. The oil dip and slow cooling retain the temper of the steel.

It isn't always necessary to spend hot middle hours of the day just loafing because bass won't rise to surface lures. Try lures that move through the water at some depth, and use them in fast water.

Every angler has been annoyed by slipping thread as he attempts a rod winding job. The trouble may be avoided if about two inches of the thread is wetted. The wet thread will cling to the rod until the winding lashes it securely in place.

Reeling a plug swiftly through the water is not the only way to catch bass and pike. Occasionally allow the plug to lie quietly on the surface, then give it a series of hard, short twitches. That makes a plug look just like an injured minnow.

The next time you fish with a grasshopper for bait, try this trick. Cast the 'hopper on a rock or log projecting above the surface of the water, then lightly jerk it off into the stream or allow it to leap of its own accord. Watch out for a hard strike the instant the insect touches the surface of the water.

NURSERY WATER

At the last meeting of the Board, the Borough Council of West Chester, turned over the Township Line Dam, situated on the headwaters of Chester Creek, Chester County, to the Fish Commission for fish cultural work.

An agreement between the Fish Commission and the Board of Game Commissioners authorizing the establishing of a Refuge on the Silver Lake Project in Bucks County, was accepted.

Lake Warren in Bucks County was open to the public for fishing on July 15. This lake will be removed from the nursery stream list.

WARDEN APPOINTED

Announcement has been made by the Fish Commission of the appointment of Floyd Bachman, 49 Broad Street, Stroudsburg, Pa., as Fish Warden for Monroe County.

Mr. Bachman succeeds the late Warden Harry Custard.

A MEMORABLE BASS OPENING

(Continued from Page 15)

I have been privileged to meet and to fish with and it is my earnest hope that every fisherman may at some future time be brought to realize that the rules of the game as adhered to by this relatively small group of central Pennsylvania fishermen means the conservation of our future bass fishing. If some steps are not taken soon to preserve this wonderful sport, it can only end in one thing—extinction.

NURSERY WATERS OPEN TO FISHING

The following waters were taken from the nursery list of the Fish Commission at the Board meeting held July 8, 1940:

Elk County	Windfall Run, trib. to Driftwood Branch, 2½ miles from mouth to source.
Elk County	Clear Creek, trib. to Driftwood Branch, from source 3½ miles.
Perry County	Kansas Valley Run, trib. to Horse Valley Run.
Perry County	Headwaters of Laurel Run.

The Board also announced that the following waters were set aside at the same meeting to be used as nursery waters from July 8, 1940, up to and including July 31, 1943:

Clinton County	Closing portion of Lick Run, trib. to W. Br. Susquehanna River—200 yards of this stream to be closed on both sides—to be used as an exhibition stream by CCC Camp 120, Farrandsville, Pa.
Lycoming County	Closing portion of Black Hole Creek, from the water company dam downstream to the Penna. Railroad culvert below Huston Avenue, all of which is within the Borough Limits of Montgomery, a distance of about ¼ of a mile. Stream to be used as an exhibition stream.

RECORD BASS

Too late to be classified with the record smallmouth bass for 1939 was the magnificent fish reported by Wayland Birch of Point Marion. Plugging produced the catch in Ruble Backwater of Lake Lynn which produced the record smallmouth the previous year and James Staley of New Salem was the angler who made it. The fish, 21 inches in length, tipped the scales at 5 pounds 10 ounces, topping last year's record smallmouth from the Conodoguinet Creek in Cumberland County in weight by 9 ounces. "I checked and weighed this fish," writes Wayland, "which was of exceptionally heavy girth due to the abundance of natural food, and know it was authentic. Measurement was made from the tip of the jaw to the V in the tail. No allowance was made for shrinkage, although it was brought to me four hours after it had been killed."

RESOLUTION

Following is a resolution drawn up at the last meeting of the Board of Fish Commissioners in connection with the death of Honorable Judd Turner, Assistant Director of the Board of Game Commissioners:

Whereas, it has pleased Almighty God to take our Friend, Judd C. Turner, Assistant Director of the Game Commission
and,
Whereas, we are filled with deepest grief for his Wife and Family, nevertheless, we are not without hope that he is reaping his reward in some existence high above the transient things of earth,
therefore, be it
Resolved, that even though his form will no longer be with us, his example will live and be an inspiration to give as he did—He typified everything that was good and honest in the world of conservation, and be it
further
Resolved, that this resolution be spread upon the Minutes of the Board of Fish Commissioners and that a copy thereof, duly certified, be forwarded to Mrs. Turner and Family and the Members of the Game Commission.

I hereby certify that this is a copy of the resolution adopted at the meeting of the Board, held July 8, 1940.

ATTEST:
H. R. STACKHOUSE,
Administrative Secretary

C. A. FRENCH,
Commissioner of Fisheries

LICENSES REVOKED

Under the provisions of the Act of May 2, 1925, and the amendments thereto, the Board of Fish Commissioners at one of its regular meetings, revoked the Fishing Licenses of the following persons until after the date given below, and no licenses are to be issued to such persons until after that time.

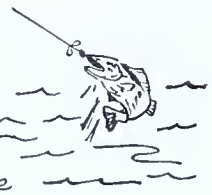
Name	*Address*	*County in Which Violation Occurred*	*Revocation No.*	*Effective Until*
Dewey Peter Sherry	Milesburg, Pa.	Centre	5	April 16, 1941
Paul Michalic	219 E. Ridge St., Coaldale, Pa.	Schuylkill	6	May 2, 1941
John Barnhart	Warfordsburg, Pa.	Fulton	7	June 13, 1941
Edward W. McCray	Dott, Pa.	Fulton	8	April 9, 1941
Harold Palmer	Dott, Pa.	Fulton	9	April 9, 1941
Brice Carnell	Dott, Pa.	Fulton	10	April 9, 1941
Chester A. Zimmerman	Clarence, Pa.	Clinton	11	May 8, 1941
William Litka	122 N. 11th St., Allentown, Pa.	Lehigh	12	May 3, 1941
Bernard Tanner	Smethport, Pa.	McKean	13	May 29, 1941
Arthur A. Carlson	Byrnedale, Pa.	Elk	14	June 9, 1941

The Allegheny River, famous for its bass fishing, yielded this big leatherback carp to Henry Zdanowski of Vandergrift.

FINE BOOKLET

Dwindling minnow supplies in natural waters and the increased demand for bait by an ever-growing army of fishermen have combined to herald a new farming industry —minnow-raising. Anglers pay well for choice minnows and bait-dealers are barred from seining many waters where the natural supply is depleted. Minnows are also in demand for stocking artificial lakes as forage food for larger fish. The recent Bureau of Fisheries publication, *Propagation of Bait and Forage Fish*, by Henry C. Markus, gives practical information on how to construct and manage minnow ponds, how to choose the minnow best for local conditions. This circular may be obtained for 5 cents from the Superintendent of Documents, Government Printing Office, Washington, D. C.

MIDDLE ATLANTIC ASSOCIATION OF CASTING CLUBS



An association of sportsmen's clubs formed to promote tournament casting, encourage organization among anglers assist in conservation; and support all moves toward true sportsmanship.

1940 SUMMARY

To Member Clubs of the M.A.A.C.C.:

At a meeting of the Executive Committee, the Secretary of this Association was authorized to write to member clubs, summarizing the Association's activities and sending to the president or the secretary of each member club a copy of the financial report of the Treasurer of this Association. *Will you please have this letter read at the next regular meeting of your Club?*

The names of winners of the events at the 1940 Tournament have been publicized in various vehicles of publication. The July issue of the PENNSYLVANIA ANGLER, *for example, contains details of the Tournament, as well as* information and general publicity relative to YOUR OWN CLUB. *(Also—another short item relative to your own Club will appear on the M.A.A.C.C. pages of the August issue of the* PENNSYLVANIA ANGLER. *And each month during the year when someone from your Club gives me information about your Club or any of its members, I shall be glad to write a similar item publicizing your Club on the M.A.A.C.C. pages of the* PENNSYLVANIA ANGLER.)

In general, may I add, nearly all of our member clubs were well represented among the prize-winners at the 1940 Tournament. Also, there were participants who did not actually win prizes, but who turned in good scores. (Note: At the 1939 Tournament, 63 prizes were awarded; and at the *1940 Tournament, 73 prizes were awarded.)*

At the moment, there are *fourteen paid-up member clubs* affiliated with this Association. (Two additional clubs have joined since the enclosed program and score card were compiled. They are: Delaware County Field and Stream Association and Monocacy Field and Stream Association.) At the 1938 Tournament, there were seven paid-up member clubs; and at the 1939 Tournament, there were eleven paid-up member clubs.

At the moment, too (although it has not been the aim of this Association to make money, but rather to build a successful and growing organization), we have a *bank balance* of $18.79; whereas, the 1938 Tournament ended with a deficit of $15.00, and the 1939 Tournament ended with a bank balance of $4.61.

Further, this Association now has a set of *By-Laws* which was submitted, at a general meeting, to the delegates to the Association and which met with their approval after they had taken up each item thereof in detail; so that when problems arise (as in several instances during the last meeting), many of these problems are now solved by reference to the By-Laws.

The Association's *Tournament Rules* were changed this year from those of last year, in order to conform with recommendations from members who participated in this Association's 1938 and 1939 Tournaments.

Walter Johnson of Roxborough, winner of the rifle-shooting contest at a recent Lower Merion Rod and Gun Club picnic and outing.

Tournament arrangements and other details relative to the 1940 Tournament Day itself were worked out with a view toward profiting by past experiences and toward making improvements over arrangements and details of the previous two years. It is noteworthy that in 1938 there were 60 entrants; in 1939 there were 118 entrants; and *in 1940 there were 145 entrants.*

In summary, then, believe me when I write that THE BOYS have been WORKING! And the Association wishes to express grateful appreciation to the Chairmen of all of its Committees, as well as to the delegates and other members of member clubs who generously contributed time and energy to the success of the 1940 TOURNAMENT.

Sincerely,

ELLEN A. DIETRICH (MRS.), *Secretary,*
1141 Roosevelt Drive, Upper Darby, Pa.

Branch Valley Fish, Game and Forestry Association

Up to the time these lines were written, the boys who belong to this club have apparently been very busy, for we have not heard from them recently on their fishing, casting practice, or other activities. How's the fishing up there these days, fellows?

Delaware County Field and Stream Association

At its August meeting, this Club signed a lease for a permanent Club site on the Chatley Hill Haven Farm, located at Dutton Mills Road and Chester Creek Road in Delaware County. On this site, there are facilities for every kind of sport, although casting practice must be carried out on land, as it is in the majority of our member clubs; for a large enough pond is not yet available here. For surf casting, there is a level field of approximately 1500 feet in length on which members plan to practice during the coming year for the 1941 M.A.A.C.C. Tournament.

The above-mentioned farm will be the scene of this club's Annual Field Day on Sunday, October 6th, when surf, bait and fly casting, archery, trap, pistol and rifle (small and large bore) shooting events will provide numerous prizes. This club cordially invites all sportsmen who may wish to attend to do so.

The September meeting, held September 9th, was election meeting for this club; while the next meeting will be held on October 7th in the Norwood Fire Company Hall, Norwood, Pa.

Dover Fishing Club of Philadelphia

After a very active summer packed full of fishing this club will continue its regular monthly meetings for the fall and winter season on September 18 in the club's assembly rooms at the Philadelphia Bourse. The entertainment for the September meeting is an educational talk and pictures on counterfeit money and its detection, given by the United States Secret Service.

A royal reception is being planned for the members of the champion Dover casting team who repeated their performance of last year by again winning the Ocean City Cup Event on August 10. This makes the fifth year they have won the Cup out of the past six, an enviable record; one that no other club in the Association of Surf Angling Clubs has equaled nor is apt to equal for some time to come.

The team average throughout the entire event was 419 feet. In twenty-six years of competition this is the first time any club has obtained an average of over 400 feet. The nearest approach to this was back in 1925 when the Long Island Casting Club came through with an average of 398 feet, 10 inches. What's that? You thought these fellows could cast over 500 feet without any difficulty? Well they can, but remember: this is an average of 25 casts and one break will cut an awful hole in any man's score. Furthermore, the Dover team in setting this new record experienced a *break* which makes it all the more remarkable.

The one break for the Dover team was made by Fred Todt, Jr., whose total footage of 1,640 feet gave him an individual average of 410 feet for all completed casts; but, it's the "breaks" that count and Fred got 'em in reverse. Otherwise the Dover team average would have been 436 feet.

As usual, Ralph Bowman set the pace with an individual average of 464 feet, 10 inches. His longest cast for the day was 478 feet, 10 inches. Right on his heels was Harold Lendz, former world's champion surf caster, with an individual average of 449 feet. The total cumulative footage of the Dover team was 10,497 feet; just two miles . . . all this in spite of a "break" which counts zero for the cast. Boy, that's casting!

Charles Vollum, eastern champion caster in 1937, also a member and director of the Dover Fishing Club, was casting this year for Ocean City. His individual average was 446 feet. The records show that this is the sixth consecutive annual cup tournament in which he has made an average of over 400 feet and not one break in the entire six years. He doesn't get a medal for this but it's a record that no other currently active surf caster can claim. Congratulations, Charley. You're a credit to the game.

Dover Day will be celebrated this year on September 22. This is the occasion for the annual open tournament sanctioned by the Association of Surf Angling Clubs. In addition to the usual turf events special courts will be laid out for plug casters of whom we expect some of the finest in the community to be assembled in individual competition. A special attraction in the person of W. Ward Beam will be on hand to entertain the ladies and a buffet lunch will be served. We dislike to make any predictions but in 20 years not one Dover tournament has ever been postponed on account of the weather . . . see ya there.

Huh?

Al Freck, who is supervising the 1940 Dover Prize Fish Contest, is keeping right after the members to register their catches. He's getting results, for this looks like the biggest contest in the history of the club with some of the keenest competition, especially since he announced the prizes for big game fish. For obvious reasons the results are kept secret until the contest closes at the end of the year. So, regardless of how much "fish talk" you hear from the other fellow, don't neglect sending in your catch. You've gotta swell chance to win.

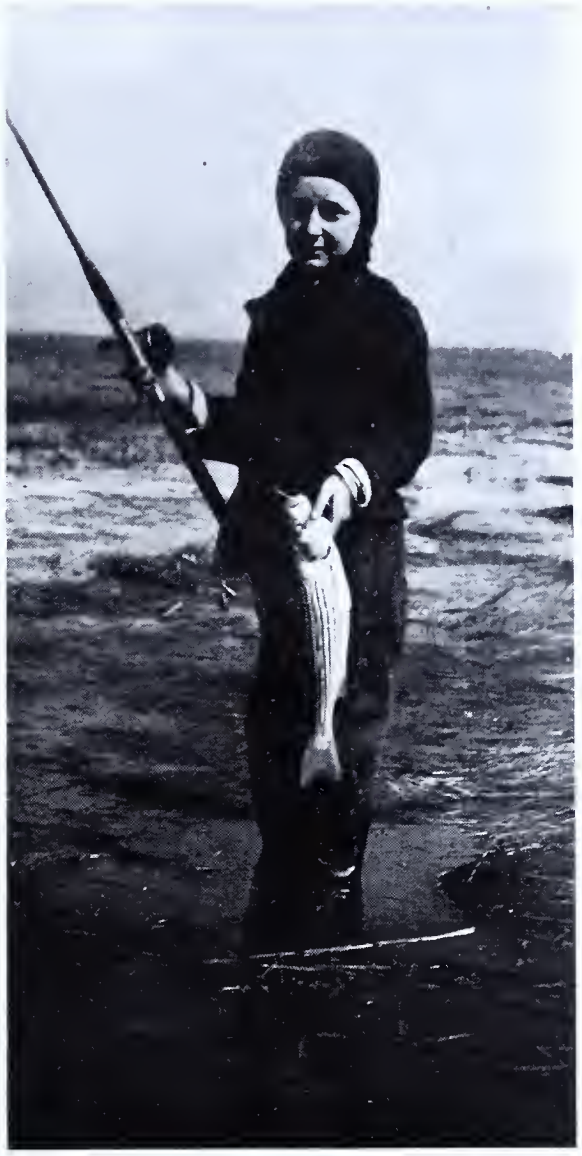
Information regarding the Dover Fishing Club of Philadelphia or any of its activities may be obtained by addressing the secretary, Mr. Robert Morris, 2728 West Montgomery Avenue, Philadelphia, Pa.

Gloucester County Game and Fish Association

E. Kirkbride, E. Elliott, T. Twinn and H. Haskill, all of Wilmington, together with Lorin Ott, while fishing one day during the past summer with Captain Peder Norstand out of Barnegat City, caught eight tuna and 6 bonita. Carl Leisy, William Clemens and Al Banks, all of the Gloucester County Game and Fish Association, while fishing with the same Captain at a later date, caught sixteen tuna and fourteen bonita.

We've also learned that Lorin Ott and his son, Donald, have been bass fishing on several occasions recently and have made sufficient catches to "keep the old spirit up." Donald (or "Snuffy," as he is called at home) goes along with his Dad on all of his fresh and salt water fishing trips. His Dad says he's a good sailor and a good fisherman as well. Donald is now thirteen years old and, as many of us will recall, placed fifth in the M.A.A.C.C. Plug Casting for Accuracy event, in which thirty-four others, all men, were entered. More power to "Snuffy"!

The next meeting of this Association will take place on September 30th, in the Franklin House, Glassboro, New Jersey, writes R. Edward Klaisz, of Woodbury, New Jersey, president of the Club. Following the business meeting, the members will be entertained by "talkies" and a sports picture.



Thirteen year old Donald Ott of Mantua, N. J., who accompanies his Dad on all his fresh and salt water fishing trips. He is shown here holding a striped bass he caught on a trip recently.

Holmesburg Fish and Game Protective Association

The Holmesburg Fish and Game Protective Association held its September meeting at the Club House, Delaware River and Pennypack Streets, Philadelphia, on Monday evening, September 9th. Refreshments were served and a full program, including movies of interest to sportsmen and capable speakers, was outlined for the winter season.

Beginning in October, as previously herein announced, meetings of this club will be conducted at the Holme Library, Frankford Ave., and Hartel Street, Philadelphia, on the second Monday of each month.

The club will entertain its members at its Annual Fall Outing at the Club Grounds on Sunday, September 29th, commencing at ten A. M. when trap, rifle and pistol shooting, surf and plug casting contests will be open to all sportsmen. Prizes will be awarded in all events.

Lansdale Sportsmen's Club

On August 10th, which, fortunately, was a fine day, approximately 130 turned out for this Club's corn and doggie roast. Besides having all they could eat of corn, "weenies," ice cream, and the like, most of those who attended took part in numerous contests, the winners of which were as follows:

Trap Shooting—(Class A)—Fred Eurich, of Line Lexington; and, 2d place, Ely Hendricks, of Lansdale. (Class B)—1st, John Ruth, of Kulpsville; and 2d, R. Kratz, of Lansdale. In addition to the regular trap shooting event above, there was a special trap shoot which was won by Lester Shiffert, of Kulpsville.

Plug Casting—(Class A) Chris Eurich, of Lansdale; and 2d, Linford Slotter, of Kulpsville. (Class B) 1st, F. Selb, of Lansdale; and 2d, C. L. Boorse, of Lansdale.

Balloon Race—Willard Kriebel, of Lansdale.

Rolling Pin Throw—Helen Corrado, of Lansdale.

Shoe-Kicking Contest—Pearl Robin, of Lansdale.

25-Yard Dash for Boys—A. Naerero, of Lansdale.

25-Yard Dash for Girls—C. Corrado, of Lansdale.

This Club will hold its next meeting on September 24th in the American Legion Hall in Lansdale.

Lower Merion Rod and Gun Club

Without a doubt, numerous "fish tales" will be exchanged during the Fall and Winter months among the members of the Lower Merion Rod and Gun Club who have been enjoying fresh water, surf and deep sea fishing during the past summer.

Several deep sea fishing trips have been conducted by the Chairman of the Deep Sea Fishing Committee, Charles Young, of Narberth. On one of these trips, we learned, Dave Ridge, also of Narberth, won a handsome boat pole for having caught the largest fish of the day.

In addition to conducting such group trips, Charles Young and his son, Charles Young, Jr., have spent almost every weekend of the summer angling in the salty air of the seashore.

John Miller, of Narberth, Chairman of the Surf Fishing Committee of this Club, has likewise conducted surf fishing parties to various points, including Beach Haven and Ortley's Beach, New Jersey, as well as to Lewes and Lavelette, Delaware. Other members of this Club who have been "night owls," while the croakers and kingfish have been running, are: Walter P. Miesen, of Narberth, last year's president of the Club, as well as Ernest and Elmer Jenkins, also of Narberth. Walter Johnston and Ross and Sherman Williams of Roxborough. When these boys relate how large striped bass "throw the squid," they all seem to agree that it is a moot question whether the "stripers" are becoming educated or whether the fisherman's technique is at fault at such a time.

During the past several weeks, a number of the Lower Merion Rod and Gun Club Bass fishermen have turned in entries for the LARGEST BASS CONTEST for 1940.

At this writing, plans are underway for the Annual Fall Outing of this Club, to be held at a date and place to be determined by the Board of Directors at its regular September meeting.

Monocacy Field and Stream Association

The next meeting of this club will be held on Monday, October 7th, in the Club Association Room, Mauch Chunk Road and Elizabeth Avenue, Bethlehem, Pa. At this meeting, plans will be furthered for the stream improvement project on the Monocacy Creek on which this Club's Fish and Game Committee has been working during

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CONCERNING CARP

(Continued from Page 13)

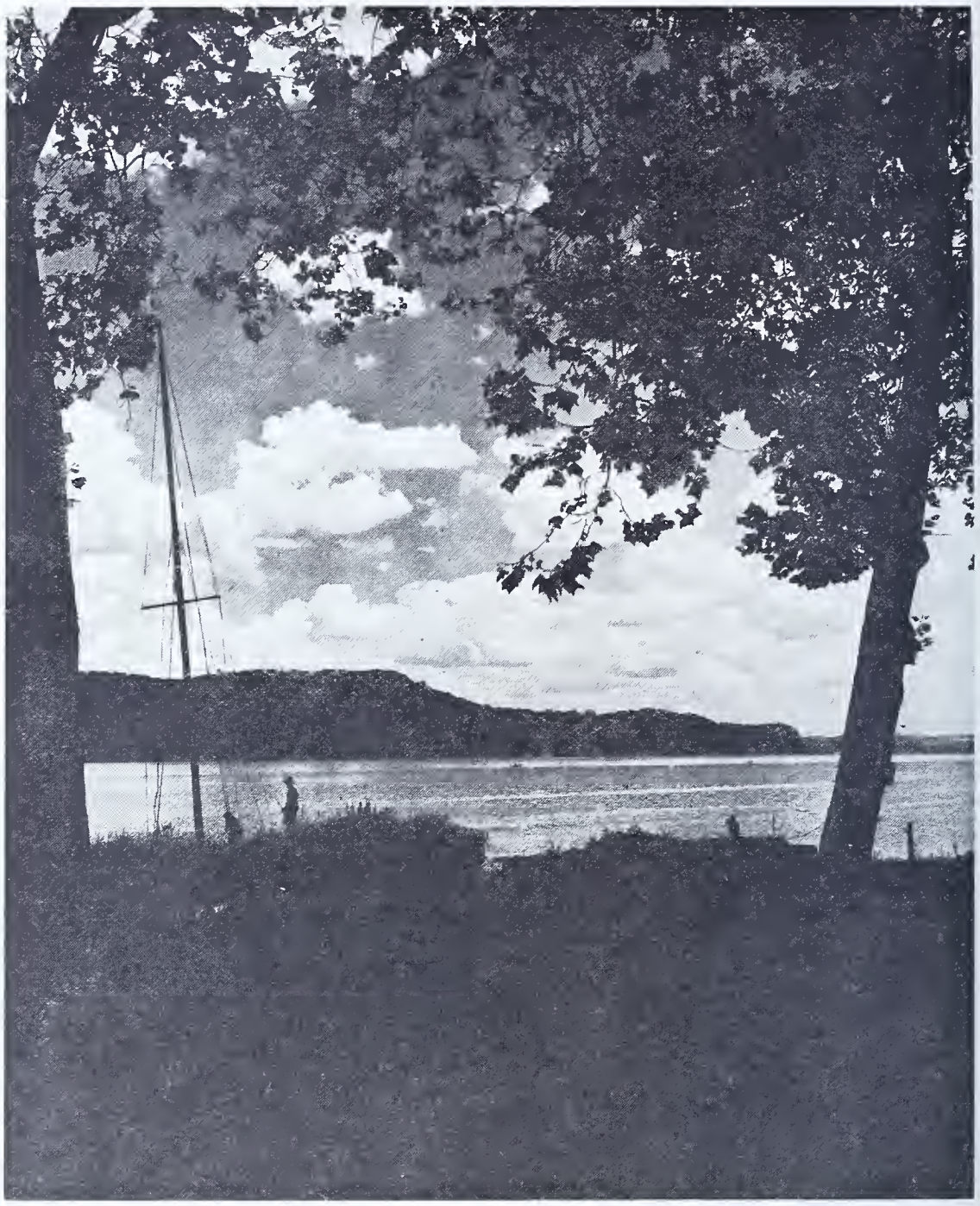
edly do rank as a menace to the young carp, as do the bass later in the season.

Conceptions of value, insofar as the various species of fishes in our waters today are concerned, will undoubtedly undergo changes with the passage of the years. We are inclined to believe that at the present time, large numbers of carp in our favorite bass waters (the North Branch of the Susquehanna River, the Juniata and its Raystown Branch, the Upper Delaware, the Conodoguinet Creek and the Perkiomen Creek, to mention some of them) is not of sufficient moment to cause alarm.

Carp Control

Once established in a stream, the problem of controlling the number of carp is one that has never been satisfactorily solved. The tendency of the species to burrow into the mud, permitting the lead line of a sein to pass over, eliminates netting from consideration. In the days when gigging was permitted, many carp were taken but eradication through that method also seems impractical. Perhaps the best method by which control can be established for the species is through hook and line fishing, a practice that has won thousands of converts throughout the state in recent years. The powerful build of the carp, plus the dogged resistance of which it is capable makes it a worthy opponent for the fisherman. Furthermore, its inherent shyness has rapidly served to convince many anglers who have tried this sport that carp fishing is really an art. Take a ten pound carp on hook and line and be convinced.

Fishing during the night and in very early morning is frequently resorted to be veteran carp fishermen on the Juniata watershed. Favorite baits include the doughball, comprised of corn meal and molasses kneaded into a consistency sufficient to make it stay on the hook, and sweet corn. Corn in season, and even canned corn, ranks as highly effective bait. It has long been a custom, when a school of the big fish has been located, to bait them for perhaps a week, getting them accustomed to coming to the spot where fishing is being anticipated. When the school is using the spot regularly, corn baited small hooks permitted to lie on the bottom in that location will often bring results. Another bait that has long been a favorite is the potato, boiled or raw, and diced. Black lines of around 18 pounds test also seem favored by many carp fishermen. Patience plus proper equipment usually yield good sport.



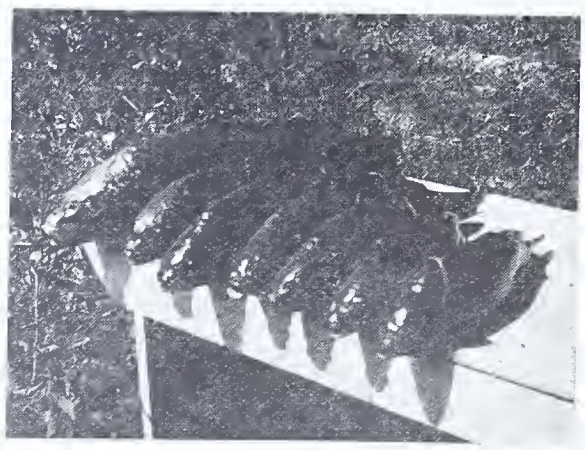
Carp are very abundant in Safe Harbor dam on the lower Susquehanna River.

HOPE TO RESTORE SALMON FISHING

A salmon-fishing industry of major commercial importance may some day be established in New England rivers from Connecticut to Maine, as a result of experiments now being conducted by the Bureau of Fisheries under the national conservation program.

Involving in its broader aspects the methods which the Bureau developed and used successfully in restoring and maintaining the salmon runs of Alaska, a 10-year program of research has been set under way with the cooperation of the commercial and sports fishermen and officials of the New England States.

Preliminary plans for the new conservation work were discussed at a conference in Cambridge, Mass., some weeks ago, at which it was developed, among other things, that rivers in Maine today are the only streams in the United States where natural runs of Atlantic salmon remain.



Stanley Patricoski, ace carp fisherman of Mount Carmel, scored this catch of carp in the North Branch of the Susquehanna River near Bloomsburg.

With representatives of New Hampshire, Vermont, Connecticut, and New York joining in the discussion, agreement was reached on the program to seek rebuilding and self-perpetuation of salmon stock in many of the New England streams.

First steps in the salmon-stocking work will be a comprehensive survey of the most promising of the streams from mouth to source, to ascertain the number and kinds of obstructions to fish migration, the adequacy of fish ladders for the movement of the salmon, and the effect of river pollution upon the fish supply.

After the survey is completed, the most suitable stream will be selected for further experimentation, State legislation to protect the stream from fishing during the experimental period enacted, and, after the 10-year period of research, controlled salmon fishing may be permitted.

Hell-benders which in the water resemble nothing so much as an old sock filled with mud, have lungs, but rely chiefly on their skin for respiration.

MIDDLE ATLANTIC CASTING CLUB NOTES

(Continued from Page 19)

the past months. Following the regular business meeting, it is anticipated that club members will be entertained with moving pictures.

Montgomery County Fish and Game Protective Association

This club will hold its next meeting on the third Friday of September in the office of Adolph Muller, located on the DeKalb Street Pike near the Germantown Pike in Norristown. Inasmuch as the club has not met since the third Friday of June, there will be numerous business details to be disposed of; so that it is anticipated this meeting will consist chiefly of general business routine.

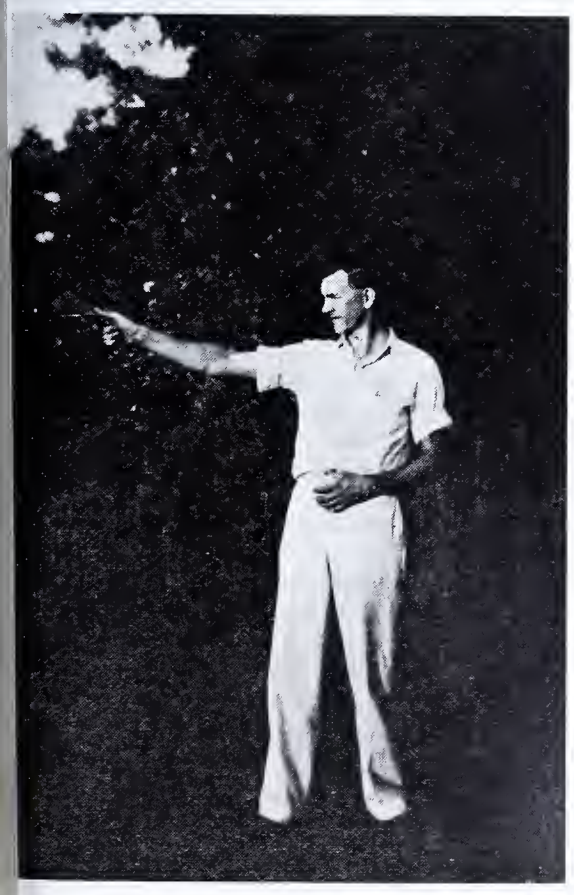
Sam Cope showed those present at the last meeting of the club some interesting moving pictures which he had taken while on a trip to the South.

At the club picnic on September 14, a dog show, quoit matches, trap shooting, a tug of war, a soft-ball game and a clam bake kept everybody busy and happy under the direction of George Sinclair and Martin Horn, who had general charge of the occasion.

Members of this club were also members of the Clam Bake Committee of the Montgomery County Federation of Sportsmen's Clubs, and deserve credit for the success, despite rain, of the Federation's Second Annual Clam Bake held on August 17th. They were: Charles Hughes and George Sinclair, both of Norristown.

Pennsylvania State Fish and Game Protective Association

When the Pennsylvania State Fish and Game Protective Association held its 1940 "Bass Outing" on September 11th at the Chain Bridge on the Neshaminy, prizes were awarded in archery, quoits, water boiling, trap shooting and bottle fishing, as well as for actual fishing on the Neshaminy on that day. The names of the winners of the various events were not available at the time of the "deadline" for this writing, but it is planned to include them in the next issue of PENNSYLVANIA ANGLER.



Fred Plumridge of Larchmont who has been a winner of several rifle and pistol contests staged by the Lower Merion Rod and Gun Club.

Just about this time each year, this club holds its "Bass Outing," which is attended by men, women and children and which continues through the entire day.

Among the winners of the 1940 "Trout Outing" of this Association, held at Valley Creek near Paoli, were the following: L. A. Bonsal, of Willow Grove, who won the Water Boiling Contest and the Bottle Fishing Contest; Victor Morocco, of Philadelphia, who won the Quoits Contest; and Blair Kennerly, who won the Largest Fish Contest for the day, when he caught a twelve-inch brown trout in Valley Creek.

Perkiomen Valley Sportsmen's Association

This club held an out-door meeting on the evening of August 8th. It was originally planned that prizes were to have been given for the largest and the largest number of legal bass caught by club members in the Perkiomen between 7:30 and 8:30 that evening. The Perkiomen was so cloudy, however, that this plan was abandoned.

The pleasure derived from participation in the Plug Casting for Accuracy event fully compensated for the disappointment caused by the forced cancellation of the "real fishing" contest; and rods and reels sang, while casters hit or missed their marks, 'til dark. Wm. Weirman, of Schwenksville, won this event, while Fred Reed, also of Schwenksville, placed second and Willard Townsend, of Perkiomenville, took third place. Fred Eurich of Line Lexington, and Frank Clamer, of Collegeville, also placed and won prizes in the event.

On the second Thursday of October, this club will hold its next regular monthly meeting at the Borough Hall in Schwenksville, reports John C. Markley, of Schwenksville, Secretary.

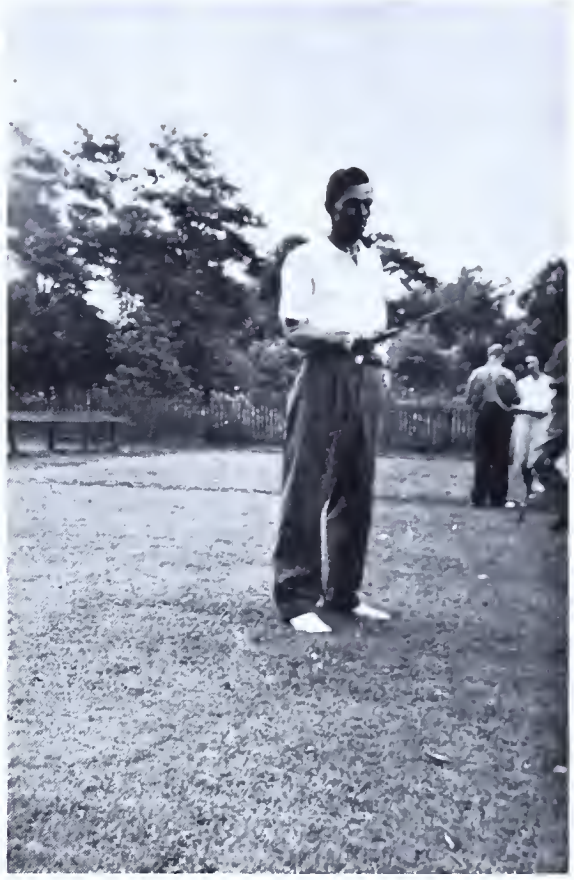
Royersford Hunting and Fishing Association

A noteworthy catch made by a member of this club consisted of four large carp caught by Lloyd Walters, of Royersford, while he fished in the Perkiomen at the Arcola Bridge near Yerkes. Twenty pounds was the total weight of the four carp, the largest of which "tipped" the scales at seven pounds. Two weeks later Lloyd captured a nine-pound carp and a five-pounder near the same spot.

Since we last heard from this club in the PENNSYLVANIA ANGLER, Paul Tyson, of Royersford, while fishing in the Perkiomen, we are told, caught a huge bass, the size of which we have not been able to ascertain prior to this writing.

Also, William I. Fox, taxidermist, and Charles Garber, both of Royersford, have recently been seen bass fishing along the Perkiomen and the French Creek; while illness caused Irvin Clemens' rod and reel to remain reluctantly at home for a short while.

This club will hold its next regular meeting on the second Monday of October, when further plans will be made for all-year-round trap shooting.



Ernest Jenkins of Narberth, winner of the plug casting for distance event at a recent outing of the Lower Merion Rod and Gun Club.

Upper Providence Fish, Game and Forestry Association

The date was August 15th. Setting—the top of a picturesque hill, overlooking the Schuylkill Valley.

With Old Sol tucked away for the night, an enjoyable afternoon of trap shooting gave 'way to a brilliantly moonlit evening on the Beynon Farm at Oaks, Pa.; and the Trap Committee of the Upper Providence Fish, Game and Forestry Association broke into bags of corn, boxes of "weenies" and rolls, cans of hot coffee and other provisions with which to entertain seventy-five hungry men and women—members of this club, as well as members of other clubs of Delaware, Montgomery and Philadelphia counties.

Lillie M. Wilde, of Roxborough (wife of Oscar Wilde, Secretary of the Roxborough Fish, Game and Forestry Association), evidently had had more experience at corn roasts than the others who attended; for she reached the scene equipped with a salt shaker and a napkin in the form of a huge bath towel. And could she eat corn! She wasn't even one kernel behind Howard Shallcross of Graterford or Harry Cole of Norristown or Joe Dietrick of Oaks. And there are those of us who know how these boys can eat corn! (Note: The writer wonders how long that fellow survived after Ches Bacon put salt instead of sugar in his coffee? R.S.V.P.)

Among thirty-five entries in trap shooting, Sam Cooper, of Eagleville, and C. L. Siders of Broomall, tied for first place by breaking 48 out of 50 birds. R. G. Heron of Broomall, placed second; Roy Schultz and Andy Ringler, both of Eagleville, tied for third place; C. W. Bacon, of Jeffersonville, won fourth place: and Norvel Croll, of Eagleville, placed fifth.

(Continued on Next Page)

LEADERS A LA CARTE

(Continued from Page 3)

losing strength in a very short time, while others from the same lot suffer no apparent damage under identical storage conditions.

The keeping quality of drawn gut also varies considerably from batch to batch, as well as with individual strands out of the same batch, and the rate of deterioration seems even greater, on the average, than with undrawn natural gut.

Much study has been given to the question of treatment of gut to improve its keeping qualities, but very little can be done. About all that is possible is to keep it in a dry place, *cool and in the dark.* It has been recommended that gut be kept in chamois wrappings, on the theory that the emanations of the oxidizing cod liver oil employed in the tanning have a beneficial influence. This is doubtful, but at least it does no harm, so try it if it sounds good to you.

Once gut has become brittle there is nothing which can restore it, and the many published formulae for this purpose represent mere hopes and prayers. Not one of them is worth the paper it is written on.

If your gut has gone democratic, heave it out. If you try to save it by treatment and use it you will improve only your vocabulary, not the gut.

There have been many formulae suggested to keep gut from spoiling in the leader box, and here is one place where it is really possible to do some good by careful handling.

What causes damp gut to decompose so rapidly I cannot say with authority, but my theory is that it is bacterial or possible fungoid. Certainly mouldy pads in the leader box do the gut no good. If I am right then a formula for a leader soak should contain something which will retard or even prevent entirely the growth of bacteria or fungae. The softening effect of glycerine on gut is well known, and it is believed to be beneficial. So is soda, in moderation. Strongly recommended is ethylene glycol, which forms the base of a widely sold leader soaking preparation.

The formula which I use myself, and which I have found will permit leaders safely to soak indefinitely, is distilled water and ethylene glycol, half and half, with a drop or two of lysol to the quart. Add a pinch of bicarbonate of soda, and you have as good a leader soak as there is.

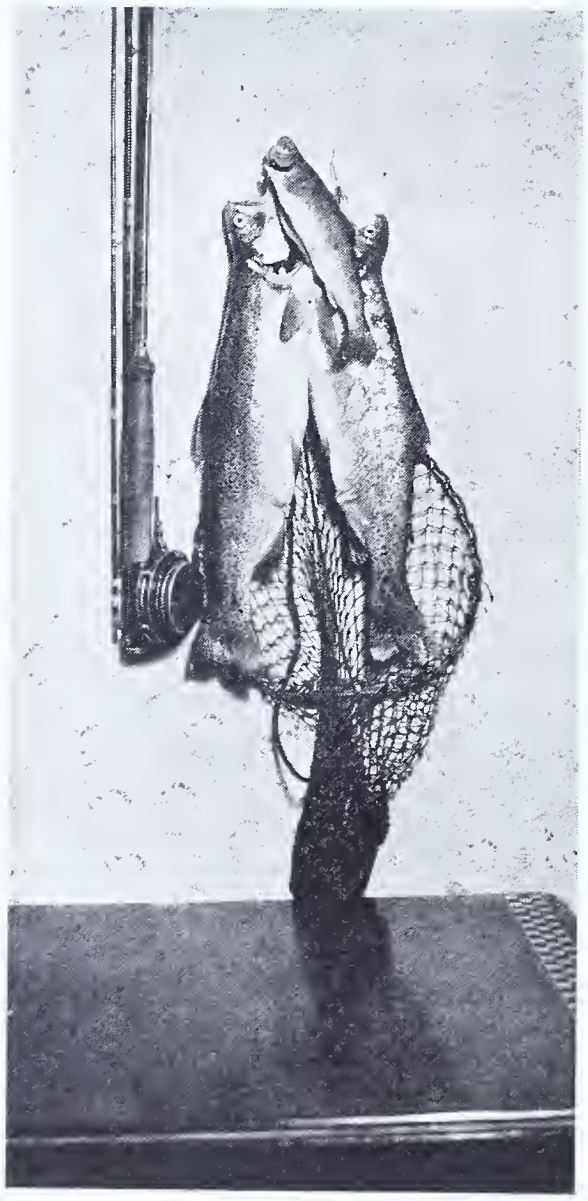
A cheaper formula consists of four parts of water to one of glycerine, with half a teaspoonful or less of soda bicarbonate to the quart. It is less effective than the first formula, but reasonably satisfactory. A drop of lysol or phenol would do no harm.

Many methods of dyeing gut have been published from time to time. Dyeing gut is definitely injurious and should be avoided. Certainly many of the formulae suggested are certain to cause impairment in strength and keeping qualities.

However, if you *must* have colored leaders, rather than go in for strong dyes whose action may be corrosive, it is preferable to use writing fluids. Carter's or Waterman's green fountain pen ink, mixed with water, produces a very agreeable tint, variable in intensity to almost any desired degree merely by adjusting the strength of the bath and the length of immersion. Use it cold, and wash the gut afterward in cold water for a few minutes to remove excess coloring water. This color is not absolutely fast, but holds well enough.

The popular mist color is made in the same manner by using blue-black ink, but the solution must be much stronger. Other Carter inks which yield nice shades are violet, sunset brown and midnight blue. All are procurable in the dime stores.

(To be continued)



On a cold, cloudy day, the West Branch of the Clarion River yielded this dandy catch of rainbow trout to the angling skill of J. A. Calkins. Flies on number 16 hooks on a half-pound test tippet subdued the 18 and 17 inch rainbows in this photo.

MIDDLE ATLANTIC CASTING CLUB NOTES

(Continued from page 21)

This club's Trap Committee, which was responsible for the good time, provided the food, roasted the corn, prepared delicious coffee, etc., is composed of: Ches Bacon, Sam Cooper, Douglas Schrack and Edgar Parsons, all of Jeffersonville; Norvel Croll and Andy Ringler, both of Eagleville; Joe O'Byrne, of Collegeville; George Bishop, George and Earl Smith, all of Oaks; and Robert Carns, Eber Hall and Raymond White, of Phoenixville.

Wissahickon Field and Stream Association

The next meeting of this club will be held on October 3d at the Legion Home in Ambler.

1500 AT JUNIOR PROJECT OPENING

York's opening of its "fishermen's paradise" for more than 1,500 boy and girl anglers of York and vicinity was an outstanding success. The committee on under-privileged children of the Kiwanis club, headed by Eugene Spangler, and the Izaak Walton League had been working together many weeks to prepare for the event. Such things as securing nearly 300 rods and reels for those young fishermen who did not have them, providing prizes, and finally making arrangements for securing the fish was a gigantic task. George S. Andes, of the Kiwanis club, chairman of the committee on arrangements, was the marshal of the forces and together with the other members of the various committees, deserves much credit for the success of the affair.

The committee and those fishermen who participated have expressed their appreciation to the York County chapter of the American Red Cross for providing its first aid car and two attendants; to Stewart Lehman for providing 105 prizes for winners, 100 pounds of peanuts, and 100 American flags; to the city police department for the excellent manner in which they maintained order during the day, and to the city department of parks and public property for the work it performed in cleaning and preparing the lake and the park for the activities. Chairman Andes, in speaking of the affair, also paid tribute to the following organizations and individuals who gave of their time and assistance: Peter Deveny, Emory Miller, Robert Gemmil, Harry Stark, Harold Coffman, Paul Hostetter, Landon Reisinger, Paul Kunkle, the Rothert Company, the York Supply Company, Phares Barnhart, Curtis E. Detter and Allen Little.

Prizes were awarded as follows: First fish caught, Donald Slenker, a catfish, a complete fishing outfit; second fish caught, a catfish. Henry Doll, a complete fishing outfit; Robert Newman, bait box; Fred Firth, rod; Charles Test, bait box; Donald Thomas, rod; Joseph Barley, bait box; John Nicholas, rod; Philip Stringer, rod; John Smith, rod; Charles Hamme, line and hooks; Sony Minnich, rod; George Harrison, rod; Robert Showalter, float; Robert Murphy, rod; Larry Warfel, for catching the largest fish, a 22-inch carp, a rod;

TROUT CONTEST

Prizes for the largest brook, brown and rainbow trout caught in Indiana County by a member of the Indiana Fish and Game Association or affiliated groups will be given by the association this year. Fishermen wishing to enter the contest, (will be on from April 15 to July 1), should register their catch with an Indiana merchant, George D. Leydic, trustee of the association, announced.

N. Y. AND PA. IN RECIPROCAL AGREEMENT

A reciprocal license agreement has been reached between New York and Pennsylvania, regulating fishing in the Delaware River on the State's boundary.

Under the agreement, the State Conservation Department said, New York sportsmen may fish in the waters of the river under Pennsylvania jurisdiction without a Pennsylvania license, and vice versa.

TAKE THE BOY ALONG

(Continued from Page 5)

was young. Or some oldster may have related the yarn to the then youthful Dad when he married and settled in the community half a dozen or so years before the turn of the century. And after all perhaps the tale had no foundation other than idle conjecture and old wives' gossip originating at the husking bees and the quilting parties in the long ago. Anyway as the saga unfolded the old mammy is alleged to have recounted the story with all the negro's love for the dramatic and spiritual, vowing the treasure had to be dug up on a rainy night and that an invisible voice would talk to the finder; that only dire calamity could befall anyone ignoring the dead soldier's final directions.

Although Dad thought he could identify the triangular rock from hearsay and even pointed it out to friends of many years ago, as far as we knew no one ever found the treasure. Dad himself, ever superstitious and with a great respect for the sanctity of the dead, wouldn't have dug there for a million dollars in cold cash. The eerie mysterious brooding of the surroundings seemed to dampen his spirits; somehow or other neither of us ever liked to tarry thereabouts when the wraith-like mists began to steal out over the water as evening shadows merged with twilight.

While I have little patience with the supernatural, still a small quiet voice or something seemed to hover about, whispering—whispering: "Go and dig!" Closing the eyes momentarily, even now as then I picture him, tall, bearded and rugged; silent, cold and aloof. Subconsciously the vision seems to frame a brush fringed wormwood fence, in double rank behind it as far as eye can reach, crouching, a long line of Union blue, gaunt, sweaty, smelly fellows "at alert," battle packs rolled, stacked, tense, gnarled hands clasping and unclasping worn musket butts, bayonets, glinting bright and icy in the setting sun.

Officers with glasses peer long and intently at a rocky wooded slope across the way. Suddenly a bugle blares out, sharp and challenging on the still evening air—the long line springs erect with a surge, up and over the wormwood fence, out into the open at a jogging trot. The tall bearded fellow is several paces ahead of his squad—once his eyes turn in a thirsty glance at Old Glory and Her silken folds leading the way—then he stiffens with a jerk and quickens the pace. Up ahead bellows the sulphuric crash of massed musketry, punctuated by the deeper thunder of artillery's double bass—men fall fast in the shrapnel hail—officers slap laggards with the flat of their sabres and shout: "Close up, there! Damn it! Close up!"

On and on they go, files much thinner now, and up to meet them springs a line of gray. Men shout, pray, curse, cry out in pain, falter and fall, lay still or try to crawl away from the leaden storm; in the midst of the melee and nigh unto the sky born banner hovers the tall, bearded soldier. Powerful arms drive a savage bayonet home, a ripping twist and a mighty kick frees the weapon from a writhing victim in gray—again and again and yet again the slither of steel finds

Boy anglers take their share of carp.

soft yielding flesh, until a rivulet of red trickles down the musket barrel and the burnished steel takes on a crimson cast.

And then that sodden sickening thud the combat soldier knows so well—a look of pained surprise, stark incredulity on the rugged face, the leathern tan of many suns giving way to an ashen hue—nerveless fingers claw at a gaping hole in the throbbing chest—a moment he struggles on hands and knees, futilely attempting to rise, then sinks quietly to Mother Earth—face down.

The battle roars on—up and over the rocky ridge, but the stalwart warrior's travail is o'er—merciful death has released the wild spirit of the eaglet from the Adams County hills.

In silence broken only by the hoot of the mournful owl, a pale yellow moon climbs over the shattered ridge, looking down at still silent shapes sprawled grotesque and pathetic in a shambles of ruin—mayhap it wonders at the futility of man. As if in answer far away on the chilling air echoes the plaintive sobbing notes of Taps, the soldier's farewell: "Fading light . . . Dims the sight . . . Dear one, rest! . . . Peaceful Dreams."

Bosh? Maybe, but the vision persists in coming back.

How exactly true to the original the legendary portion of this recital may be; how definitely accurate, I can not guarantee now. After all thirty years and more is a long span and boyhood impressions, properly awed by the shrouded mystery of the place, are not always fit authority for a minutely accurate picture of detail. Enough to say it ran something like the foregoing as Dad used to relate the story to the wondering boy and his chosen intimates. Anyway the supposed treasure might have been found long before; certainly its authenticity was hardly doubted by the searching parties of apparently well-to-do men from some distant place, armed with picks, shovels and digging tools. The old walls of the stillhouse were dug completely out, tumbled down, and the surrounding terrain pretty well turned over. Thirty and more years . . . Perhaps now there is even no trace of the old foundation remaining to identify the spot.

Here I witnessed one of the most peculiar freaks associated with rod and line. In the creek near the old still house ruins lived two big bass. On a 4th of July morning Dad hooked one of them and after a terrific struggle in view of the excited family on shore, the bass broke away. Using a double gut leader with minnows, he waded ashore to make repairs. Going out again, he immediately had a strike and landed a big whopper of a bass. It was the same bronze back as had broken away a few moments previously; this time the broken double leader trailing from those finny jaws had fouled on the new hook.

But to get back to the lad of today; he is a problem worthy of the profound consideration of all fishermen and that whether a parent or not; he may be either an asset or a liability to the waterway. Once before on the pages of this magazine I voiced personal doubt with regard to the wisdom of the periodically recurring proposals to *drastically* lower age limits and to compel extremely youthful anglers to secure a license. Neither time nor written comment have since altered my original opinion one iota. *A proposal to lower age limits doesn't stop at that in effect.* Legal statutes are merely cold, heartless jumbles of words—it is the relationship of these words as translated into cause and effect on society that becomes important. The fruit of drastic lowering of age limits has at least one woebegone possibility—a dubious blight upon the annals of Keystone sportsmanship—*in effect it would make fishing illegal for many kids on the streams today.*

Take a look at most of the youngsters one meets—where might these lads be expected to raise the money for the license fee? A few wealthy kids would participate in the sport freely, but the little fellow across the railroad tracks is doomed unless he violates the law. Does it bode well for the future welfare of the sport to encourage bootleg fishing on the part of youth; what would be the attitude of such lads upon reaching maturity? Measure it with the yardstick of your own personal inclinations, likes and pet hates; how do you feel about the exclusive and wealthy clubs that buy up and post streams for the sole pleasure of members and a few invited guests? You said it, fisherman; me, too!

Angling is too precious a privilege to be sold to the highest bidder; it is a God-given recreation that must be guarded carefully for one and all—regardless of wealth or

(Continued on Next Page)

social position—at no time either by chance or design shall those who are by circumstances endowed with a lavish share of this world's goods, whether adult or juvenile, monopolize fishing in this State. It is with this view that the writer has ever scanned with alarm any proposal to *materially* increase the adult license fee. I do not want to see fishing too expensive for anyone. The increasing army of anglers, properly restrained and personally sportsmanlike, can only be an asset to all fishermen. Watchful fishermen on the streams in large numbers are a hurdle that selfish interests can not top; be ever chary of any suggestion which may threaten to lessen the ranks.

Some proposals as regards juveniles are with the admitted thought of barring kids from the streams—to reserve the sport for oldsters with cash. No doubt there are lads who sometimes irritate older fishermen through unrestrained ill-advised antics; it's happened to me anyway. But is there not also a lot of threshing about on the part of unwise adults, fellows old enough to know better? Is it a boy or a man who will ordinarily dig for worms on the creek bank, giving rise to erosion and silt? Is it a boy or a man who builds those first morning fires April 15th, a thoughtless practice so rightfully condemned by the land owner? Is it a boy or a man who will slop into the head of the tiny pool, dunking minnows or worms, as the dry fly man works painstakingly upward? Is it a boy or a man who will trail along or stand silhouetted against the skyline and on the bank directly opposite where the cautious flyman may be casting his lures?

One of the most flagrant examples of stream discourtesy ever inflicted on this fisherman occurred on a small creek during the past trout season. Carefully, quietly working a narrow riffle, suddenly I detected a sloshing behind. A middle-aged fisherman, equipped with about all the gadgets a man might safely carry, splashed right beside me, waded past within arm's length and surged, galloped and thundered right through the choicest part of the fishing. The discourtesy was either studied irritation at finding me ahead, a deliberate attempt to put the fish down or perhaps abysmal ignorance of the idiosyncrasies of trout.

Another adventure, really a good joke on myself, happened on a typical Southern Pennsylvania limestone stream, narrow, but deep with a strong flow. Arriving near the headwaters early one Sunday morning, I parked the car and leisurely began to assemble equipment. Another car hove into sight, raced pellmell alongside my chariot, coming to a stop with brakes singing. Out sprang three fellows with short steel rods and bait cans. On the run one dashed into the stream directly opposite, another galloped downstream about a hundred yards, the third high-tailed it upstream a space, all jumping into the water, churning up silt and debris, effectively despoiling the chance of anyone snaring an unwary trout lurking thereabouts. I know when I've been blitzkrieged, outmanoeuvred, flanked or what the heck do you call such tactics; I retired quietly subdued, out-smarted, but blamed if I can think of the incident without repressing an amused chuckle. Adults they were, but this fisherman did not constitute the biggest obstacle in the way of their success that morning. The very blundering crude tactics of the trio precluded the possibility of catching anything other than a chance small fish now and then —unless of course, the Goddess of Fortune smiles more lavishly on such individuals than she ever has on this oft frustrated flyman.

No doubt there are those who will disagree with my theories on the juvenile angle—and may wish to bar the kids from the streams through devious means or for various reasons. To such of those I make one request: please refer to Page 21, November, 1939, issue of PENNSYLVANIA ANGLER, and note the picture of Andy Macko, and his big 25 inch pike weighing 5½ pounds, taken from the Big Shenango. Look at the radiant smile on that little fellow's face. Where and when did you ever see anyone more inarticulately pleased and spontaneously radiating good fellowship? I'd rather see that smile on Andy's countenance than to have caught the fish myself, and don't think I would not like to connect with one like it. That smile overshadows the taking of a dozen 25-inch pike.

An amusing little interlude occurred while I was working the Juniata last summer. Near the shore a ten to twelve year old fished from a big rock; out in the middle of the river waded his Dad. Dad wasn't going so good; but sunfish after sunfish came sonny's way. The lad was keeping only those six inches long, and few were making the grade. Each was measured meticulously; three or four went back with an audible sigh, several were on the stringer. The rod was a broken-off bait caster, the reel had lost the handle, a wooden plug substituting, the overalls ragged and torn, the straw hat boasted the inevitable hole in the crown, Huck Finn, Tom Sawyer, the Barefoot Boy, all in one, alive, vibrant and deadly serious. As I jokingly hailed him, proud as a peacock he offered: "Guess it's up to me today; Pop ain't got any yet!" Gazing out over the water at "Pop," silently I mused. Did he appreciate how kind his God had been to him? Deep down in my heart I believe that Dad knew how favored he was of his Maker—otherwise that lad might not have been fishing there.

Again I say take the lad with you. That lad is the future guardian of your sport. If you don't take him along—if you don't teach him good sportsmanship, who shall and when? Teach him that fishing is one of the oldest pursuits of man; that the history of man is interwoven with the taking of aquatic life since time immemorial. Christ's Disciples were fishermen. Teach him fishing was once a serious calling in every day life; a practice worthy of the most profound thought in prehistoric society; a precious source of food for the struggling human beset on all sides with hunger, cold and dangerous animals. Teach him inland fishing (for trout and bass have no place merely as a source of food in present society), is rather to be viewed as a sport of the first rank. Teach him that the safest and most humane method of fishing is with artificials; that most users of plugs or flies are specialists and their class ranks all others when it comes to skill and finesse. Teach him that with each passing year artificials will come more and more into their own; that when he reaches our age, preserves such as now at Bellefonte where only barbless hooks and flies are permitted will likely be the rule rather than the exception. Impress upon him the Golden Rule of the conservationist: "Fish more for fun and less for meat," and "If you would catch more, kill less."

Even though you may be a live bait fisherman yourself and feel it is too late to change, not so the lad. Put a flyman's outfit in his hand for trout; either a fly rod or a plug caster's short stick on bass. Take the advice of one who has run the full gamut of piscatorial pleasures—from the worm laden sunny hook at six to the sublimity of the fly purist many years later—artificials are more sporting, more intriguing, offer more action, greater expectancy and bigger thrills; there is no tiresome waiting, no feeling of futile inertia, and the casting is decidedly pleasant whether fish may be hitting or not.

Especially inculcate into the lad's growing intellect the thesis that *no skill is required to kill a fish, but that considerable artistry is often necessary in the taking of one; that the mark of angling greatness is ability to fool finny warriors with artificials and not the full creel.* Emphasize a dead fish can not be taken again—but a "hooked" fish may be netted the second time if carefully released the first. Be sure he understands from the outset that the future productivity of favorite haunts depends to a great measure upon his own sportsmanship; that in our present overcrowded conditions a fish population may be compared to the "sowed managed crop" of the farmer; only as a fisherman plants, conserves and gleans may he hope to catch. The farmer harvests only the mature crop; so long as the angler continues to stock, nurture and kill only an adult crop and in reasonable number, one need hardly fear the future.

That boy has a definite duty and a positive obligation to the future of good fishing —but today's responsibility lies with—you.

Again take the boy along and get him started right. Begin now to lay the foundation for the day when you shall have passed along; guard well that when the time comes you shall let him a heritage such as someone passed on to you. If you are a sportsman worthy of the name, you can do no other.

MAKING AND FISHING THE CORK BASS BUG

(Continued from Page 7)

in casting floating bugs is to allow the bug to float quietly for at least 15 or 20 seconds after casting and then to twitch it slightly. This is repeated until it becomes necessary to retrieve the lure. Often a strike will come at the instant the bug contacts the water and the angler must be alert to expect this. It pays to cast the bug among, or even on the surface of, any fine debris or weeds which may be floating in likely spots as not seldom a bass will strike at it right through such trash. Be careful, then, not to strike so hard as to snap your necessarily light leader— it has happened to me.

12,000,000 FISHERMEN

Spend $1,200,000,000.00—one billion, two hundred million dollars every year.

That's the biggest slice of America's huge sports bill which amounts to four billion dollars—$4,000,000,000.00—annually. It's 6% of the entire national income.

Let's break down these astounding figures further:—

$4,000,000,000.00 means an average of $30.00 for every man, woman and child of our 130,000,000 population.

After deducting babies, and little boys, and little girls, and folks in homes for the aged and other institutions, and panty-waists who don't go in for sports—there remain 30,000,000 sportsmen who spend an average of $134.00 each in the course of a year!

Tennis players spend $35,000,000.00.

Golf players spend $500,000,000.00 (the annual caddy bill is $70,000,000.00, exclusive of tips, more money than is paid to all college professors in the USA).

Bowlers spend $450,000,000.00.

Skiers spend $150,000,000.00.

Motor Boaters spend $600,000,000.00.

Spectators to all these sports and many more, including auto racing, baseball, boxing, football, horse racing, basketball, etc., spend the impressive total of $260,000,000.00.

Sounds like big money, doesn't it?

But, brother—go back to the beginning of this story and squint at that amount which *fishermen* spend every year. Yes, take a good look—what does it say? *One billion, two hundred million dollars*—$1,200,000,000.00. Right!

And they lay this amount on the line every 12 months for rods, reels, lines, baits, flies, accessories, travel expenses, boats, motors, guides and everything else considered essential to fullest enjoyment of the sport.

They spend from $5.00 to $2,000.00 apiece every season (and that means 12 months of the year). So, using the conservative average of $100.00 (instead of $134.00) per year per fisherman and estimating the number of US fishermen conservatively at 12,000,000, it is easily seen how 12,000,000 fishermen spend $1,200,000,000.00 annually.

Before making a pertinent observation or two, we give you the entire sports line-up; here it is:

Angling	$1,200,000,000.00
Firearms	650,000,000.00
Motor Boat	600,000,000.00
Golf	500,000,000.00
Bowling	450,000,000.00
Skiing	150,000,000.00
Attendance Group	260,000,000.00
Miscellaneous	190,000,000.00
America's Sports Bill	$4,000,000,000.00

FLYING FISH FOR ANYONE

(Continued from Page 9)

When the fish strikes and the sound of the reel wakens you from a temporary nap it will not be necessary to pick up the rod to hook the fish. The fact that the rod is held secure and that the line has been tight will hook the fish.

The wind may blow to stop the fly caster but no wind will prevent trolling with the fly and spinner. And once you start this type of fly fishing there will be little desire to resort to bait fishing again. The success no doubt will be encouraging enough to make you want to learn to cast with a fly which will add many more hours of fine sport.

HEADS LIST WITH 22 1/16 INCH BROWNIE

Writes Jack Richards of the *Pottsville Republican:*

Unless some one comes forward to dispute his claim, C. W. Springer of 538 Columbia St., Schuylkill Haven, holds the record for having hooked the largest trout reported by any Schuylkill County angler during the 1940 season.

The trout, a brown, measuring 22 1/16 inches in length two weeks after it was caught, and having a girth of 11½ inches, was taken from Penn's Creek, a Centre County stream, which for years has held the reputation of producing some of the largest browns in the state.

This fish has been entered in the contest being conducted by Miller's Auto Store and it will probably be declared the winner of the $5 prize offered by the store. In addition it will be eligible for the grand prize offered by the Miller firm for the largest fish entered in all of their nine stores throughout the state.

Springer as soon as he brought the trout home, froze it in an electric refrigerator, neglecting to take it to the store until about two weeks after it was caught. It shrank about two inches in that time, so that at the time it was caught it really went about 24 inches in length.

Largest brown from a Schuylkill County stream and entered in the contest was a 17¾ inch brown taken from High Bridge by Fish Warden Anthony Lech of Cressona. It had a girth of 9½ inches.

James Colna of St. Clair took a 16-inch brown from High Bridge. Its girth was eight inches.

Herman Hoke of Donaldson had a 16¼ inch brown of 8½ inch girth which he took from Pine Creek.

John Pecovich of Minersville, has two browns entered in the contest, one 15¼ inches from Middle Creek and a 13½ incher from Deep Creek.

Largest rainbow trout entered was a 16-incher by Harold Kissinger of Valley View, taken from Deep Creek. It had a girth of eight inches.

Just a reminder that watersnakes are mighty active now.

Joe Hughes of 108 N. Centre St., this city, had the largest brook trout, a 12¼ incher which he took from Beury's Dam. It measured 7 inches in girth.

Richard E. Mack, local photographer, who spends his week-ends at Lake Wallenpaupack, where he has his house trailer parked for the summer, has been doing pretty well there as a fisherman. On a recent week-end trip he took a 24½ inch wall-eyed pike and a 20-inch pickerel, which any angler will admit were pretty nice specimens.

John Schlitzer, Joe Roth and George Schreeder of this city, on a trip to Lake Wallenpaupack, caught 15 fish of the combined species of perch, sunfish, rock bass and black bass. The largest black bass was a 15-incher taken by Roth. They report having seen a number of dead fish on the lake, one of them a bass which was more than 22 inches in length and weighed six or seven pounds, another a 16-inch perch.

MONSTER SALMON CAUGHT

According to reports from Petersburg, Alaska, a King salmon taken from the Point Colpoys trap—at the north end of Prince of Wales Island— on July 31st, and canned in the Petersburg cannery by the Ward's Cove Packing Co., was probably the largest salmon ever caught.

Earl N. Ohmer of Petersburg, reporting to the Bureau of Fisheries, said the fish had a dressed weight of 104 pounds. Making a very conservative allowance of 15 per cent for loss in dressing would make the live weight about 120 pounds. It measured 53½ inches from tip to tail and 38½ inches maximum girth, having a tail spread of 17 inches. The fish was in "bright" condition, with red meat, and contained no spawn.

Records Are Shattered at Spring Creek Project

New records were established at Fishermen's Paradise on Spring Creek, Centre County, this year in every department, the figures released by the Fish Commission reveal. The statistics for attendance, catch and kill of trout, and for the largest fish were shattered as the seventh season was brought to a close on July 24.

First indication of a banner year was on the opening day, May 24, when 1553 anglers registered at the official booth. This passed the previous opening day attendance of 1249, established last year. The mark before that was 1222 in 1938.

With the water in Spring Creek maintaining a favorable temperature this year and with muddy water running off more quickly than it has during the past few seasons, daily catches of trout throughout the two-month time were consistent. This fact was obvious to employes at the project.

With the increase in attendance on the opening and following days, it was natural that the kill of trout would increase, also. All these predicitions were established with the official figures released by Chief Fish Culturist C. R. Buller from his office at the Pleasant Gap hatchery.

The record-breaking fish was caught by John Fiedor of Fallen Timber on Friday, July 19. It was a rainbow 27 inches long, weighing 6½ pounds. This is the largest trout ever taken at the Paradise.

Attendance 1st Day	*Attendance Total*	*Catch*	*Kill*
1940—1,553	16,891	18,750	8,149
1939—1,249	14,793	11,365	5,914
1938—1,222	12,473	9,345	4,989
1937— 586	9,123	9,335	4,027
1936— 464	6,513	8,467	2,663
1935— 470	3,265	8,457	3,247
1934— 361	2,952	5,907	2,472

CARLISLE MEET SETS HIGH STANDARD

The Carlisle Fish and Game Association's second annual field day attracting 300 competitors and 1,500 spectators, established a high standard for similar assemblies of sportsmen for friendly competition.

Few such programs in this section have provided such a variety of competitive events. It was like a multa-ring circus and the visitor who had come just to look was perplexed by the varied activity. The ping of the .22, the blast of the shotgun, the whir of arrows, the clang of horseshoes mingled in a sportsman's symphony that was music to the outdoor enthusiast.

In a far corner of the field fly and bait casters toiled with their less noisy weapons but competition was just as close.

Sportsmen were drawn from Harrisburg, York, Landisburg, Blain, West Shore communities and even as far away as Washington.

Probably the day's outstanding performance was the bait casting for distance by George Benner, New Cumberland, who won this event with an average of 191 feet. His best cast was 207 feet. Veteran sportsmen said Benner's exhibition probably never had been excelled at field days in Central Pennsylvania.

The Carlisle Fish and Game Association retained possession of the team trophy for bait casting but lost the team cups for rifle and trapshooting. The York Riflemen gained possession for a year of the handsome rifle trophy while the Harrisburg Hunters and Anglers took the team trapshooting trophy, thanks to the excellent shooting of Bill Douglas who had perfect scores in both skeet and grouse.

Douglas, incidentally, won the greatest number of individual prizes. Besides firsts in skeet and grouse, he took a Class B second in mo-skeet-O and a first in darts.

The field day was honored by one State champion—John Fulton, of Carlisle, R. D., the Pennsylvania horseshoe champ, who won his favorite event from a fast field.

Handsome prizes donated liberally by stores of Carlisle, Mt. Holly Springs and Newville were presented to the better performers in each event. Visiting sportsmen said they never had seen more attractive prizes in a Central Pennsylvania field day.

D. A. Hein, general chairman, and George Beltzhoover, Carlisle Fish and Game Association president, declared the day could not have been so eminently successful without the splendid cooperation of members and the liberal donations of stores and other friends of outdoor life.

Grand prizes were presented to these persons: J. R. Shulenberger, shotgun; Foster Cromleigh, .32 rifle; Hoyt Brubaker, fly rod; Ira Dunlap, .22 rifle; Bert Baldwin, casting rod; Amos Dewalt, casting reel; L. R. Kremer, hunting coat; Tom Terris, fly rod; C. E. Snyder, fly line; George McCullough, wading boots.

Results of horseshoes—Class A. 1, John Fulton; 2. Chester Little, Hanover, York County champion, 50 to 37, Class B. 1. C. H. Shirk, New Cumberland; 2. R. E. Crone, Wellsville, 50 to 23.

Summary of events:

Archery—Class A. 1, Harry Bear, Carlisle; 2, Frank Childs, Harrisburg. Class B. 1, Ras Clausen, Carlisle; 2, D. A. Hein, Carlisle.

Parts—Men. 1, Bill Douglas, Harrisburg 75 points; 2. Whitey Kunkle, New Cumberland, 65 points. Women. 1, Mrs. Richard Heider, Carlisle, 60 points; 2, Mrs. Leona Gleim, Carlisle, 35 points.

Fly casting for distance—1, George Grove Carlisle, 75 feet; 2, Hoyt Brubaker, Carlisle 66 2/3 feet; 3, Gerald Rhodes, Carlisle, 63 feet; 4, E. L. Meade, Camp Hill, 52 feet.

Bait casting for distance—Class A. 1 George Benner, New Cumberland, 191 feet 2. George Taylor, New Cumberland, 174 feet Class B. 1, Prof. C. W. Fink, Carlisle, 162 feet; 2, C. K. Fox, New Cumberland, 160 feet

Bait casting for accuracy—Class A. 1, Ray Watkins, Harrisburg, 58 points; 2, C. K. Fox New Cumberland, 54 points. Class B. 1, L F. Miller, New Cumberland, 26 points; 2, R H. Goudy, Harrisburg, 24 points.

Fly casting for accuracy—Class A. 1, Ray Connley, Jr., Carlisle; 2, George Grove Carlisle. Class B. 1, Charles Drawbaugh Mechanicsburg; 2, Richard Hinkle, Boiling Springs.

Mo-Skeet-O—Class A. 1, Howdy Weber Camp Hill, 9 out of 10; 2, Ray Porter and Bill Costello, both of Carlisle, tied, 8 out o 10. Class B. 1, Schmaster, Harrisburg; 2, Bil Douglas, Harrisburg.

Rifle events—Prone, 50 yards. Class A. 1 R. O. Wellman, York; 2, G. R. Blosser Landisburg. Class B. 1, E. H. Strayer, York 2, W. B. Allen, Carlisle. Off hand, 50 yards Class A. 1, A. Gladfelter, York; 2, W. Harbold, York. Class B. 1, L. Hoffman, Carlisle 2, G. B. Hedrick, York.

Pistol events—25-yard slow fire Class A 1, Ben Rosen, Harrisburg; 2, Spahr, Pin

H. C. Smith of Monessen snapped this photo of Billy Sheppard of Smithton as he made his first try for trout with fly in Somerset County's Fall Run.

Grove Furnace. Class B. 1, Clouse, Loysville; 2, Trimmer, Carlisle.

Trapshooting—Class A. Tie for first between S. M. Benion and M. B. Stuart, both of West Fairview, who had 25 out of 25. Class B. 1, F. Morgan, Harrisburg; 2, Edward Schmehl, Washington. Class C. 1, L. W. Kline, Carlisle; 2, Col. Epes, Carlisle Barracks.

Skeet—Class A. 1, Bill Douglas, Harrisburg, 24 out of 24; 2, Louis Weidman, Carlisle, 17 out of 24. Class B. 1, E. B. Karns, Carlisle; 2, E. L. Meade, Camp Hill. Class C. 1, Cadman; 2, Dave Sheaffer.

Grouse—Class A. Tie between Bill Douglas, Harrisburg, and Ray Connley, Jr., Carlisle, who had 10 out of 10. Class D. 1, William Denton, Carlisle; 2, C. D. Cook, New Cumberland.

SOUTHWEST DIVISION MEETING IS HELD

The July meeting of the South West Division was held at the cabin of George Leidic on Route 422, 10 miles east of Indiana on Sunday, July 28, 1940, at 11:00 A. M.

The meeting was called to order by the Secretary. J. M. Critchfield was elected chairman of the meeting.

The following officers and delegates answered roll call: Secretary—Yake. Delegates: Armstrong, White; Washington, Hollowood; Somerset, Critchfield; Westmoreland, Achtzehn; Greene, Gwynn; Fayette, Secoy; Indiana, Stahura.

Mr. Hollowood reported that Chairman Reed was having the Constitution and By-Laws of the Federation mailed to each association.

Mr. Achtzehn reported for Vice-Chairman Cooper that he in no way went along with the 1940 deer season.

Treasurer—Menzemer, not present.

Secretary—Yake, reported all correspondence answered promptly and attended the Westmoreland-Allegheny Sportsmen's Picnic at Idlewild.

Unfinished Business—

Moved by Secoy, seconded by Van Cleve, that a change be made on the Membership of the Pennsylvania Federation of Sportsmen's Clubs. This change to be the date of dues for the year—and the date of voiding. Motion carried.

Fayette County stated they had not received their National Wildlife Stamps.

Moved by Stern, seconded by Achtzehn, that the field officers be given their entitled raises in salary and that registered letters be sent to the President of the Board of Game Commissioners, the Commissioner of Fisheries and the Governor. Motion carried.

Moved by Hollowood, seconded by Secoy, that a contact committee be appointed to negotiate arrangements between the Frick Coal Company and the Fish Commission on Dams and Reservoirs in Fayette and Westmoreland Counties. Motion carried. The Committee: Glenn Hollowood, Emory Fulton and Lester Secoy.

The chair at this time (12:20) declared a recess to move to the spacious porch of the cabin where a feast "fit for Kings" was spread upon festive tables, prepared and served by the Directors of the Indiana County League and Delegates Stahura and Stern.

The meeting re-convened at 2 P. M.

New Business—

The discussion of a surplus of Ground Hogs located in Somerset County brought out the suggestion of trapping some and stocking them elsewhere if places were found. To the Ground Hog Hunters—if you desire to find plenty of ground hogs see J. M. Critchfield of Confluence, Pa.

In a discussion about membership in the County Leagues it was pointed out that several clubs saw no necessity for joining because those clubs were given recognition by the Commissions in the way of game and fish. Upon a motion by Stahura, seconded by Secoy, that a stocking of fish or game be cleared through the County League only that both Commissions be so notified. Motion carried.

Moved by Achtzehn, seconded by White, this Division is not in favor of the present set up of deer hunting for 1940. Roll call vote was unanimous for this motion.

TO THE SOUTHWEST DIVISION IN SESSION ASSEMBLED:

WHEREAS: The Pennsylvania Game Code states in section 716 (P. 68) That no part of any game shall be offered for sale or barter, except deer or rabbits killed in another state or nation, etc, and

WHEREAS: There appeared in the Game News of June, 1940, under the heading "Sportsmen's Queries" (page 31) two queries concerning deer hair for use in making fish flies and hair frogs, for sale, the opinion given was no lawful sale of the aforementioned material, and,

WHEREAS: The persons now engaged in the art of making fish flies and hair frogs are now using deer hair, which was either donated or purchased from a successful hunter. S nce the practice is unlawful, why not make it lawful,

THEREFORE, BE IT RESOLVED: That section 716 entitled Buying and Selling Game of the Pennsylvania Game Code be amended by having inserted after the words "or part thereof" the words "Except deer fat and hides, etc."

BE IT FURTHER RESOLVED: That the legislative Committee of the Pennsylvania Federation of Sportsmen's Clubs be instructed to institute proper legislation to this end at the 1941 session of the legislature.

I move you Mr. Chairman that this resolution be adopted and a vote taken at the October meeting. Seconded by Hollowood.

Moved by Hollowood and seconded by Fulton that this division contact the Fish Commission and Game Commission relative to the planting of vegetation along the Super Highway, to prevent soil erosion so that streams may be free from silt and mud. Motion carried.

Moved by Hollowood, seconded by Stahura, that Rollin Heffelfinger, Division "G" Game Supervisor be recommended to the position of Assistant Executive Director of the Pennsylvania Game Commission. Motion carried.

Moved by Achtzehn, seconded by Van Cleve, that a rising vote of thanks be given Delegates Stahura and Stern, the Directors of the Indiana County League and especially to George Leidic for the fine hospitality. Motion carried.

At this time Achtzehn invited the Division to hold its October meeting at the Y. M. C. A. in Greensburg, October the 25th at 8 P. M. The invitation was accepted.

This splendid photo of Tobyhanna Creek, popular trout stream, was taken by Clarence E. Miles of West Chester.

CATCHES TROUT IN ALLEGHENY

Veteran fishermen stood in puzzled amazement when Wm. Hagert of Franklin Street, Freeport, pulled a 17 inch brown trout out of the Allegheny River just above Lock and Dam No. 5, near Schenley.

HERE AND THERE IN ANGLERDOM

Joe Starr of Harrisburg and John Collier, Marysville, will remember a bass fishing jaunt they had on the Susquehanna River near Marysville last summer for many moons to come. While they scored a fine catch of smallmouth bass, the highlight of the trip came when Starr hooked a giant wall-eyed pike. After a seesaw battle lasting better than ten minutes, the big wall-eye was brought close to the boat, broke water, and, incidentally, Starr's rod, and tore away. Joe estimates its length at at least 26 inches and he is gunning for another tussle with it this season.

We had a mighty interesting letter from W. R. Walton whose splendid articles the ANGLER has been proud to run during the past year. Quoting a paragraph of his letter pertaining to fishing for smallmouth bass in Virginia's famous Potomac: "I am hoping that the approach of cooler fall weather will provide some good fishing but the best fly fishing in the Potomac occurs in July while the dragon flies and other insect life are numerous over the river. After the middle of August as a rule it is difficult to induce the smallmouth bass to rise to the surface although a grasshopper fished under it is effective."

For them as fishes salt water, and we realize not a few of our readers in the eastern and central parts of the state mix their fresh with salt water fishing, a mighty interesting book is Erl Roman's "Fishing for Fun in Salty Waters" published by the McKay Publishing Company, Philadelphia. It is refreshing to note that bait and fly casting are finding their way into this line of the fishing sport.

An enthusiastic disciple of the light bait casting outfit is F. Park Campbell, prominent Millersburg sportsman. He writes: "Recently I landed an 18¾ inch walleye on a light lure, yellow and white finish with red head. I've just started to use my new balanced outfit and I like it very much. Also caught two bass, 11 and 13 inches, and was it hot on the old Susquehanna."

You never can tell what you'll find in a big smallmouth bass when you open it up. Harry G. Smith, expert Highspire fisherman, who takes some of the finest bass each season recorded from the Susquehanna in the Dauphin County sector, had the surprise of a lifetime when he examined the stomach contents of a 20 inch smallmouth weighing four pounds. In it he found a painted turtle, three inches across the shell, as revealed when examined at the ANGLER desk.

Members of the Oil City Chapter, Izaak Walton League of America, scrubbing the bottom of their trout ponds near Dempsytown, 10 miles from Oil City. The pools accommodate 10,000 trout each. Ten thousand brown and ten thousand rainbow fingerlings will be raised to larger size for stocking.

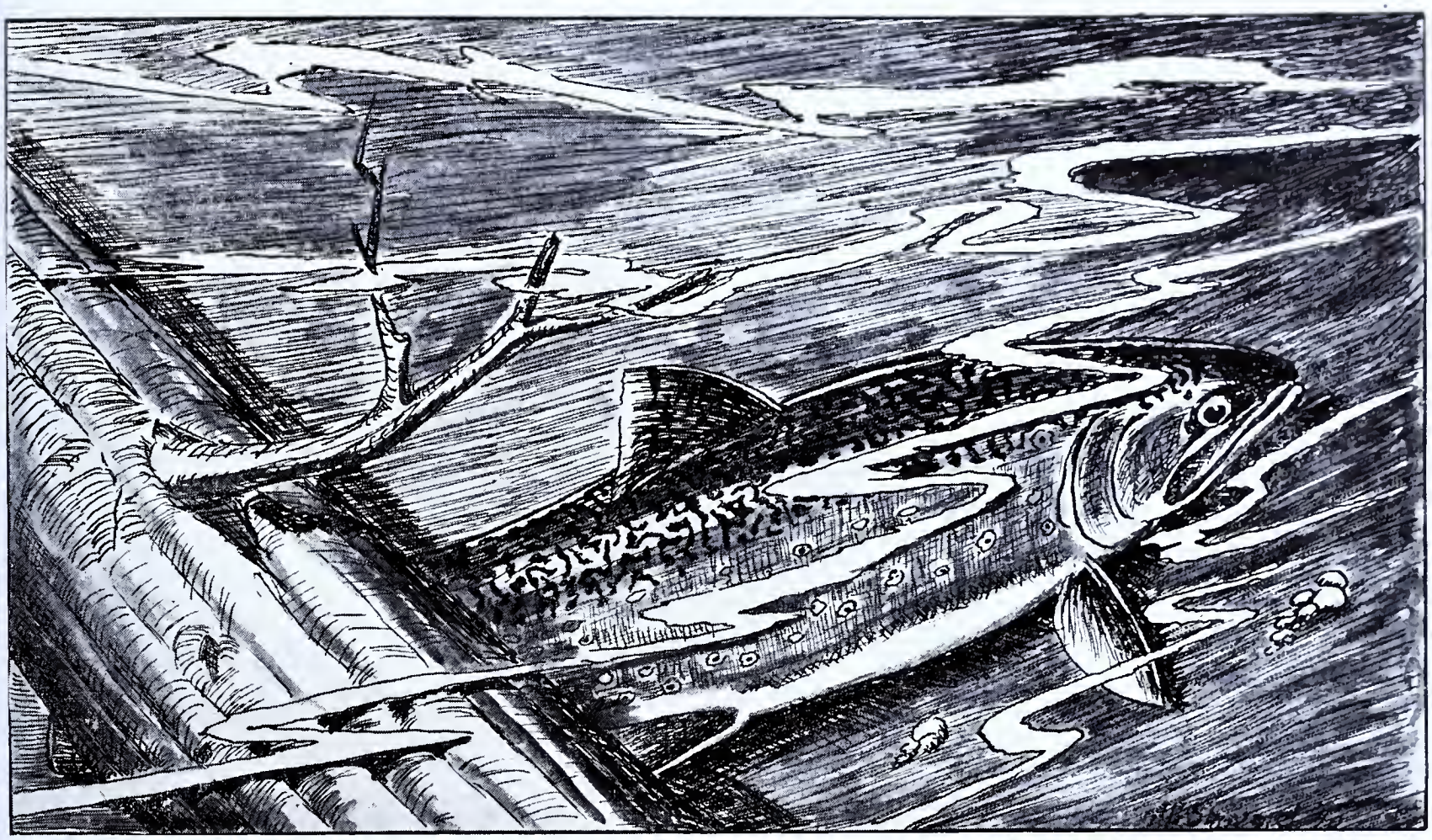
Fine trout and sucker catches are reported from the Centre County area by Warden Dave Dahlgren of Philipsburg. Fishing in South Fork Beech Creek, E. T. Haines of Snow Shoe, caught seven brown trout ranging in length from 12 to 16 inches. Fine catches of rainbow trout, from 8 to 13 inches were scored by Walter Barquist and James Sandeen of Grassflat in Black Moshannon Creek. A 23 inch brown trout weighing 4 pounds 8 ounces was caught in Spring Creek by Richard McAlvey, Oak Hall. Harold Motter of Osceola scored a dandy catch of brook trout ranging in length from 8 to 11 inches in Benner Run. Seven suckers, from 8 to 15 inches in length were caught in Moshannon Lake by John Marshall of Morrisdale. Robert Maines of DuBois scored a catch of brown trout ranging in length from 8 to 11 inches in Lick Run and Bill Brooks of Alport landed seven brownies from 7 to 12 inches in length in Mosquito Creek.

L. C. Lockerman and George Meyers of Cheswick and A. H. Prager of New Kensington scored a combined catch of 17 fine trout in Clinton County's Kettle Creek this year, reports Fish Commissioner Fred McKean, of New Kensington. The fish all were around the 14 inch mark.

Already an angling veteran, although only 15 years old, Billy Bennett of Hawley recently took a fish in Lake Wallenpaupack that was the envy of hundreds of other anglers trying the lake, according to word received from Warden Frank Brink. His catch was a 30 inch walleyed pike, tipping the scales at 8½ pounds. Prior to this catch, he had scored a catch of four pickerel in Lackawaxen Creek, the smallest fish in his creel measuring 20 inches in length.

Ralph Graydon, popular Harrisburg angler, was all smiles one day this spring. Reason, a magnificent brown trout, 25¼ inches in length and tipping the scales at 5 pounds 4 ounces. Entered in the contest being conducted by the Harrisburg Hunters' and Anglers', Ralph's catch proved a tough mark to shoot at.

Anglerettes in increasing number are invading one of the toughest fishing fields in freshwater angling, fishing for muskellunge, "tigers of the fresh water." Word comes relative to the taking of a magnificent 40 inch muskie in Conneaut Lake recently by Mrs. Frank A. Nelson of Greenville. The muskie, weighing 16½ pounds, was taken after a thrilling 40-minute battle shortly after the opening of the muskie season July 1.



Prelude

There below the sunken log a master trout is waiting;
Cautiously he scans the drift as it goes floating by.
Takes his toll of Spring time's flood, his hunger satiating,
Seeming very careful to reject my sunken fly.

Suddenly a hatching dun, caught by the eddy drifting,
Frantically it struggles from its nymph case to be clear;
From his lair beneath the log, the master slowly lifting
Calmly takes it as I watch. The first dry of the year.

Clumsily I change the cast; attach a tapered leader
Fumbling for a moment ere I tie the Badger dun
Lunging up he meets the cheat; he's hooked! The timid feeder
Swiftly writhes the bamboo as it checks his savage run.

Gradually I regain line. Each rush his strength is spending
Till a last wild flurry leaves him gasping on the top.
Tenderly I loose the fly and my assistance lending
Help him to recuperate and down the current drop.

Thus I make my offering on the Red God's rustic altar;
Bribing for another year, to watch the spring come down.
Willingly I take the trail with hopes that never falter
Toting still an empty creel, I travel back to town.

A. G. SHIMMEL.

ONE PLUG

Will Outlast Hundreds of

BAIT FISH!

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Vol. 9. No. 10

PENNSYLVANIA ANGLER

OCTOBER, 1940

EDITORIAL

Your Hatcheries

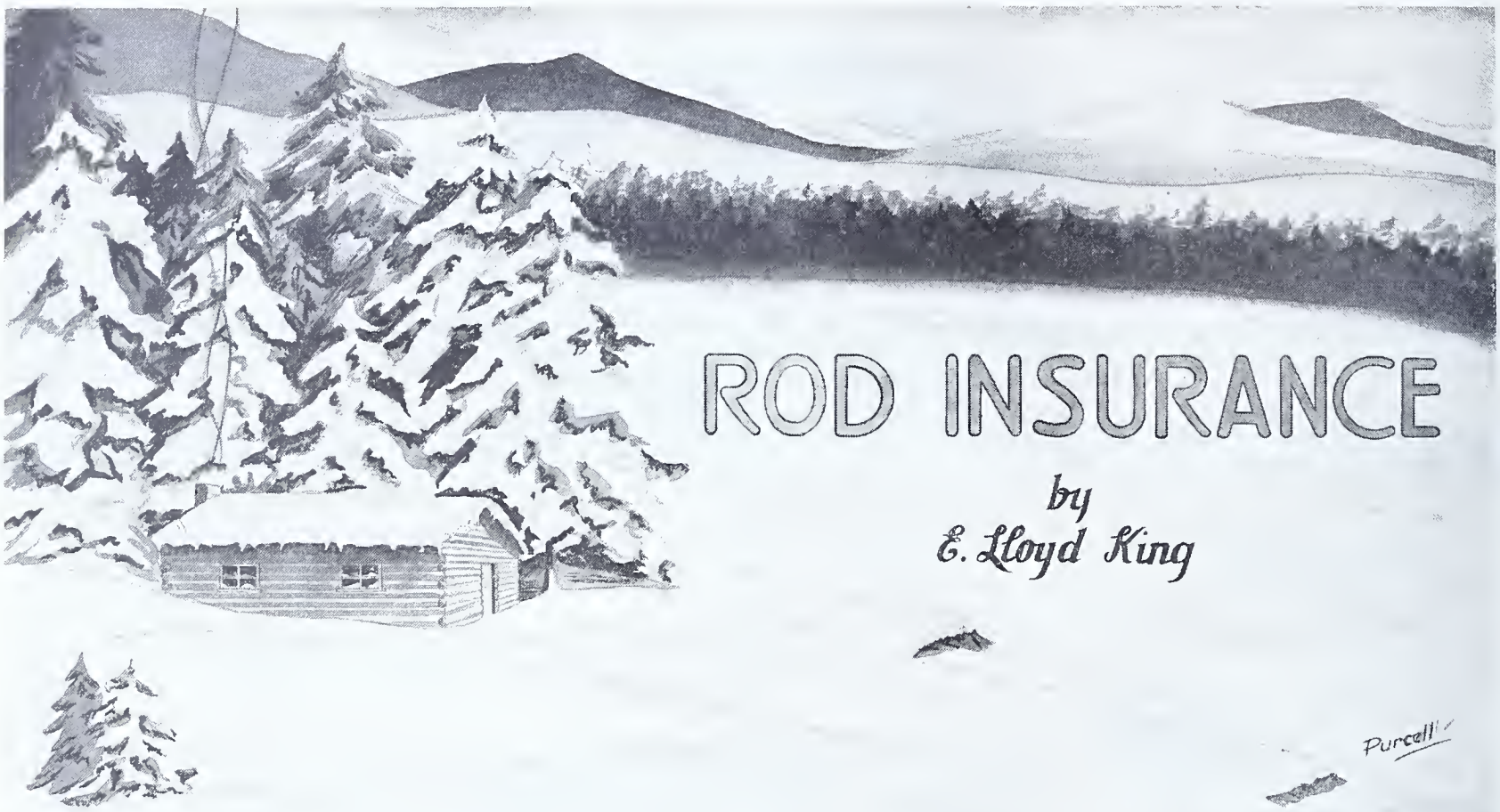
FROM time to time we have suggested that all fishermen should make it a point to visit one of their hatcheries some time during the year—special emphasis being placed on Bellefonte, Centre County; Huntsdale, Cumberland County; and Pleasant Mount, Wayne County. When completed, facilities at these plants for the propagation of large-sized trout and bass will be equal to the output of all hatcheries ten years ago.

Why don't you organize a group to make a pilgrimage to your nearest hatchery, spending as much time as is possible, for it is only by knowledge of just how all species of fish are propagated and distributed, that you may know just what is being done towards the stocking of the various waters.

By contacting your Commission at Harrisburg, all arrangements could be made with the superintendent so that at the time of your arrival, guides would be available for a trip over the property. You would be well repaid and at the same time it would be an inspection trip of a real business, in which you, as fishermen, are personally interested.

Later on in the fall, a progress report of the work of the Board will be furnished each club and association throughout the Commonwealth, which will give the highlights of accomplishments at the various hatcheries.

C. A. French
Commissioner of Fisheries



ROD INSURANCE

by
E. Lloyd King

A GOOD bamboo rod is a delicately sensitive tool designed for top performance when in first class condition—any compromise of the latter quality induces a lack of harmony every bit as noticeable as the discordant off-key note in a symphony recital.

In America rod care assumes double importance as the Sino-Japanese war drags along. With diminishing reserve stocks and little or no bamboo coming out, a serious shortage of raw material is in the offing. As a matter of every day common sense it behooves the possessor of a good stick to give his pet more than reasonable care and protection. Replacement may prove difficult; perhaps impossible.

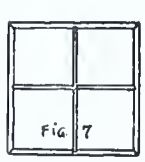
Moisture and excessive artificial heat are the arch conspirators in the short livity of many expensive masterpieces. It is a pretty safe theory to venture more fine jobs are ruined annually by ill-advised storage conditions than by abuse or indiscretion on the waterways.

Proper storage of rods is a moot question upon which even the experts disagree. Some fellows insist the separate joints should be hung up vertical from pegs or screw hooks. Others equally emphatic argue the disjointed rod may be left in the cloth bag and laid on an even horizontal surface. Only several months ago, a well known midwest sportsman and outfitter, assured your correspondent the family's 75 to 100 fine personal rods, in cloth bags, alternating butts to keep them level and straight, all in a fibre trunk, were stored in a cool dry fruit cellar, adopting the horizontal method. Properly employed, either the horizontal or vertical plan is probably satisfactory and safe.

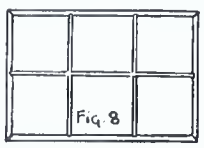
A cool dry place for storage is an absolute essential. Bamboo is porous and soaks up even unnoticeable moisture to a surprising degree. It goes without saying a damp sweating room, cellar or garage has no place in the life span of a fine tool. The rod is almost sure to absorb some of the dampness and soften as a result. The other extreme is the condition of excessive artificial heat to be encountered in some homes. The latter contingency tends to dry out the joints.

The writer prefers to store his rods in the cloth bag and special fibre cases, and in a horizontal position. During the inactive season metal cases are sometimes likely to sweat and moisture may condense on the inner walls, imprisoning the bamboo directly with the destructive element.

In view of the danger associated with the metal case, many fishermen may be pardoned for wondering why manufacturers pack rods in such a fashion. Certainly it is placing a possible weapon of destruction in the hands of the sometimes thoughtless; likewise adding several dollars to the retail cost. Then should the rod fail to give good service, the fisherman seldom places the blame where it rightfully belongs—his own carelessness or ignorance—but damns the manufacturer with a right royal will for shoddy materials.

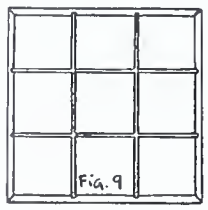


LOOKING INTO 4 ROD TYPE.

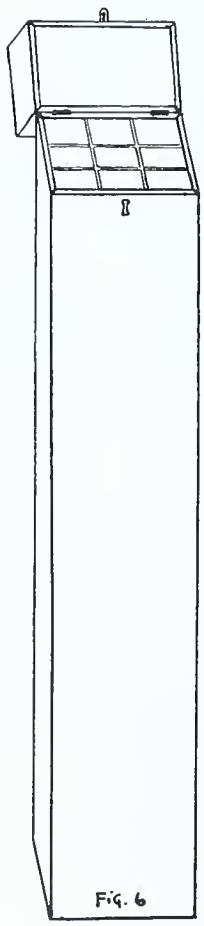


OPENING 6 ROD MODEL

QUARTERS FOR 9 RODS



King



To continue the hypothesis, what angler has not seen some companion on a drizzly moist day insert a wet dripping rod into an equally damp cloth bag, then ram both home into the metal container, screw on the cap and dash homeward. If the varnish is good and the drive only a few minutes perhaps no harm may result—provided the rod is hung up to dry at destination, but if the tool is carelessly permitted to lay in the car overnight, it may be just too bad. In each instance it is doubtful if the added euphony of the artistic case compensates for the possible ill will to be earned by the failings of human nature.

Let us assume there is a fine rod to store. The owner does not wish his pet to remain in a metal case to sponge up possible vagrant moisture; he is not sure fibre is safe. He would rather not hang the tool in some unused room to serve as a roosting place for stray insects, dust and grime. Our sportsman is a careful conscientious fellow with a deep and lasting regard for his stick; he would like to store it to the best possible advantage.

Recently there came to my attention a home made rod case, moisture proof and safe against heat. It is the leisure hour product of a tireless young man living in suburban Harrisburg, a subordinate of the writer. The lad is a white collar worker by profession, a fancy cabinet maker by inclination. Relaxation to me means fishing, hunting, perhaps writing; to him a pleasant evening spells a joust with the power saws, whirling sanders, gliding planes, fashioning some artistic masterpiece of wood, then finishing off royally with oils, varnish, wax, paint or enamel.

The case before me at the moment is a four rod model. Inasmuch as most artificial users generally have three or four active rods and as this size is convenient to handle—either at home or to carry along in the car—the majority of the remaining discussion will be based

on the four channel job; Figs. 1, 2 and 3. Anyone wishing to construct a case with less partitions need only cut down on width dimensions. Capacity up to six or eight rods, a double decker as illustrated in Figs. 4 and 5, may be obtained by modifying the plans a bit, a little overstuffing as it were.

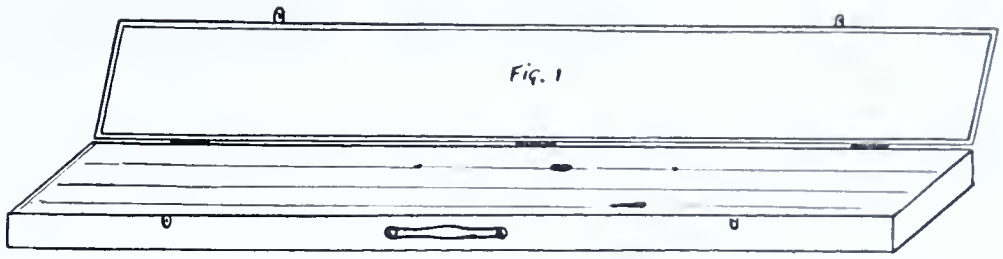
Fig. 2 has an overall length of 42 inches, and is 13 inches wide. Exclusive of the lid, the box is 2 inches in height. The sides are of 7/8 inch poplar. Partitions, likewise poplar, are 1/4 inch strips; bottom and lid plywood. Briefly the hardware is all brass; three butt hinges, the handle one commonly used on screen doors, and two hook hasp snaps.

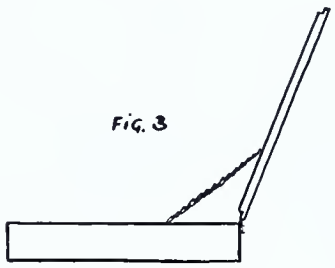
In constructing the case, the mechanic should cut the sides to a predetermined length with allowance in width to receive bottom and lid. The corners are to be mitered or lock jointed; bottom rabbeted in and nailed or screwed. Our suburban friend fashions the lid from one piece 3/4 inch plywood and then rabbets to fit inside dimensions of the case. As a safety precaution and to seal against possible moisture accumulation, the edges of the plywood are filled with any good paste filler tinted to match. The three partitions, providing space for four rods, are inserted in dadoes cut into sides the full depth of the case. Finished off either with enamel, spar or deck varnish, the result is one of which any man might justifiably feel proud. The protection of this container is sufficient that rods may be packed in it and stored in the ordinary dwelling. Unless the room is impossibly damp, the case should effectively guard the bamboo against moisture; within reason deadly artificial heat can not find egress.

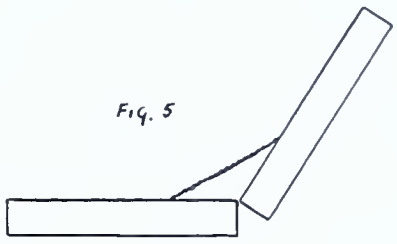
So much for the four rod type. Figs. 4 and 5 sketch a model of somewhat larger capacity, six to eight rods depending upon the fancy of the maker. In this design, there is no single lid, but the top is also constructed to hold rods. The sides of both halves are 2 inches in height, remaining dimensions being the same all around as in Fig. 2. Instead of accommodating eight standard length rods, the type as sketched has a portion of two sections divided into small compartments, these to provide facilities for reels, lines, plugs, flies and leader boxes. The small partitions may be continued the full length of the case if fancy or need dictates; eliminated entirely if storage space is desired for eight rods. Hardware and finish the same as the smaller counterpart except that the handle had best be of a suitable twin type, one part attached to each section.

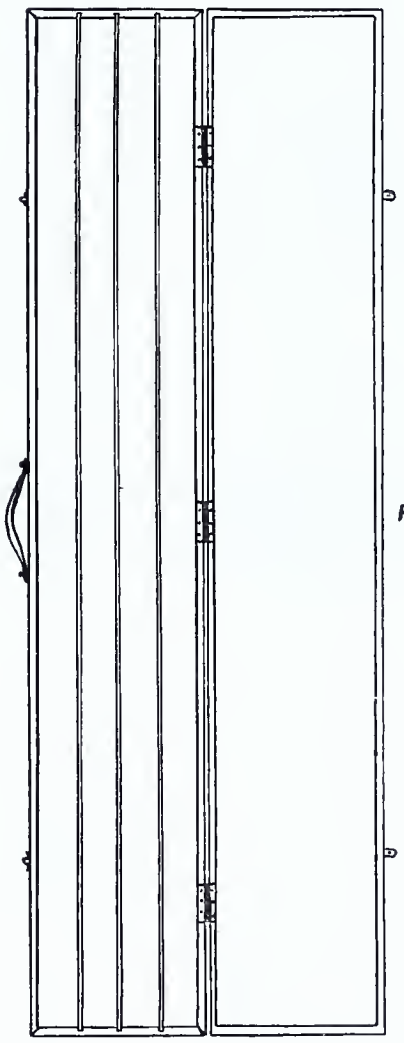
If the sportsman wishes to be ultra conservative or doubly safe, there is yet another refinement possible, a little costly, but in cases of doubt an added assurance. The whole box may be insulated or lined with sheet cork or the more reasonably priced and excellent composition sometimes employed as a substitute.

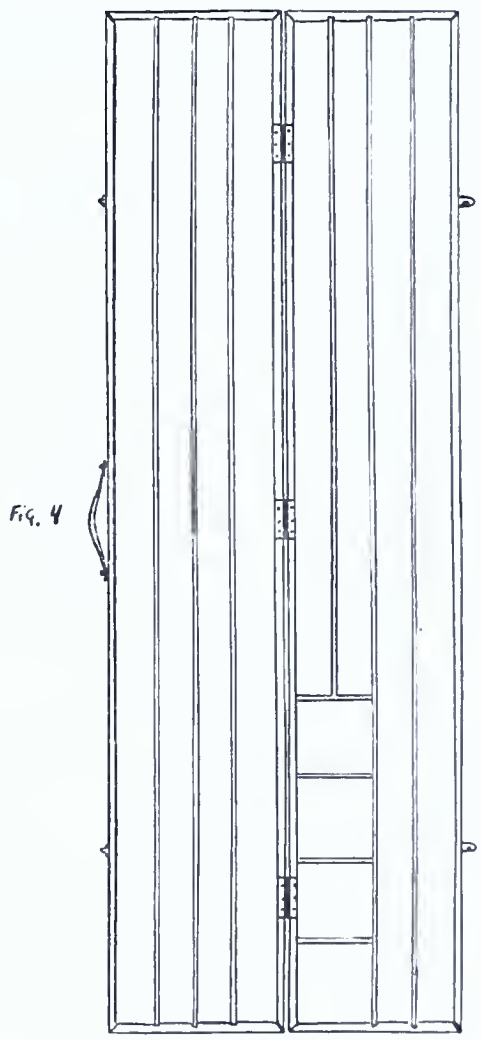
Some fishermen may not like the valise or trunk like case. Such fellows may wish to slip rods into an end-up type suitable to stand upright in some closet or out of the way corner. Sketch 6 illustrates an upright container with interior partitioned to hold four, six or more rods as the owner may elect. Fig. 7 aptly shows how the top opening of the four rod model should appear: Fig. 8 the six rod type; Fig. 9 an extreme nine rod or club job. Owing to the comparatively insignificant dimensions of the lid, hardware is somewhat more modest on these; two butt hinges and one hook hasp snap. To insure utmost tightness, the lid is to be carefully rabbeted. Overall measurements are dependent upon whether











or not the maker wishes the box to merely hold rods and cloth bags, or roomy enough also to accommodate a fibre rod case (never metal as mentioned before). In the first instance ond on a four rod job, the box should be about 6 or 7 inches square; the latter 7 to 8 inches or a bit better. Larger sizes are to be scaled accordingly.

Now this correspondent does not wish to place himself in the compromising position of putting in a plug for anyone; still he is tearing a page from the book of personal experience or shall we say disillusionment, his chiefest disappointment usually being in trying to transmit to a fly tyer self enthusiasm and pet visions of inspirational montrosities, feather or hair, generally and perhaps luckily I do not get an exact duplicate of the particular brainstorm in mind at the moment. Regardless of what one may contemplate, usually there are those fellows who owing to lack of facilities, tools or mechanical aptitude find themselves unable to construct accessories such as so recently discussed and who would gladly acquire the equipment were a source of supply available. It is the frequent practice of many fishermen to write another inquiring

(Continued on Page 19)

FALL PICKEREL

By CLAYTON L. PETERS

IN captioning this article "Fall Pickerel" the thought came to mind frequently during the early part of the pickerel season that few of these splendid fish are taken, and as the intense heat of summer increases they suddenly seem to disappear or at least show very little interest in all and sundry offerings. Then when the water temperature again lowers toward early fall they seem to feed with new gusto, and this is the season of year when pickerel fishing actually begins to seem worth the effort. The chances of good pickerel catches increase as the weather gets cooler and the sport is more than doubled due to the added fight and stamina displayed by a good sized pickerel in October and November.

There are diverse methods employed in pickerel fishing and the advocates of each method stick to their guns claiming theirs the most successful method. There are many who prefer the short casting rod, also a great many prefer the fly rod and still another class show a decided preference for the cane pole and live bait.

During the past few seasons we spent some time fishing the northeastern lakes and although we were disappointed with the actions of several good size fish taken on the casting rod, employing a sinking, wobbling plug, we soon learned that a lot of real thrills were in store by using the lighter bamboo fly rod with a quill minnow or bucktail and spinner combination. The pickerel in the lakes appear to be a bit more sluggish than those found in our cooler fresh water streams. These lake fish choose to employ methods not dissimilar to those of a veteran old brown trout, namely, diving to the bottom to lie there and sulk or entwine the leader around some convenient snag or lily pad. The stream pickerel show more of a tendency to break water and due to the structure of their jaws, they will loosen from the hook more easily than either trout or bass.

Although we always carry the casting rods along, we prefer to catch our fish on the more pliable fly rod equipment, this being purely a matter of choice. Real pleasure is to be had by using either outfit, and either is far preferable to the old method of live bait fishing, where on receiving a strike the fishermen is obliged to stand and wait until his adversary decides to move, thereby signalling that he has swallowed the bait and is maneuvering into position for another "take." This method although used by bait fishermen is slow, tedious, work and far removed from the sport of hooking a fish on the strike, as is the case with either fly or plug. However, some of the oldsters still swear by the waiting game and will try no other method. One of these fellows in ridiculing the use of flies and plugs asked what our reactions would be if we were asked to sit down to a meal consisting of synthetic steak and potatoes. Well, I don't suppose we could go along with such a proposition, but nevertheless we still feel that it is more fun to catch one fish on the strike than a dozen by the watchful waiting process. Then, too, we have the satisfaction of knowing that we are conserving the natural food of the fish in the stream, and goodness only knows that voracious species such as the pickerel require just about all the food that the average streams and lakes can supply. Bass usually abide in the same waters where pickerel thrive and also take their toll of forage, but differing from the bass, the pickerel do not go into a definite state of hibernation or dormancy during the extreme low temperatures of winter months and consequently require food the year round, thereby keeping the food supply at a minimum.

Wherever pickerel fishing is discussed by a group of fishermen we always find a few angling specialists who scoff at the thought of deriving sport from fishing for the lowly pickerel, and always mention pickerel with a deep note of contempt. It is plainly evident that they have never had the thrill of hooking into a good sized pickerel in October or November, or they are simply biased. Perhaps it is true that the sport of catching pickerel with bait does not compare with taking bass by the same method but tie into a good sized pickerel with the fly rod and spinner fly and we can assure that these skeptical fellows have some real thrills in store for them.

There also seems to be an erroneous idea among some fellows that these fish will strike at anything tossed to them. This is far from the truth and a wise old pickerel can be just as wary as the wisest old brown trout, and every bit as unaccommodating for your troubles. There are times when it seems that every fish in the stream has turned to feeding. These times, according to our observation are the exception, rather than the rule. Pickerel can be very moody at times and display an uncanny amount of reluctance to take any type of lure you might choose to try.

During the later part of the 1937 season we were fishing one of our local streams for pickerel on a cool autumn day. The sky was overcast and that indescribable sense of mellow fall atmosphere prevailed. The surrounding foliage was a riot of colors and too frequently our minds wandered from the business at hand, seeing and hearing the handiwork of mature nature in its deepest splendor. As we silently waded along our musings were suddenly disturbed by a splash of alarming proportions for the stream we were fishing. My anxiety to cast immediately was overcome by my companion's admonition that we await developments and try to find the reason for this sudden surface explosion. We had only a few minutes to wait. A damsel fly darted in uncertain course over the masses of weeds that had risen to the surface when the stream purged itself, which is the case in this stream each season. Finally it found a place to alight at a spot not more than three feet from the point where the splash that attracted our attention had occurred. Almost immediately the fish, a well proportioned twenty inch pickerel made a savage lunge at the dainty green bodied insect, but missed by inches. Having no artificials of the damsel fly to offer we tied on a rather disheveled looking bass bug and drifted it in the channels between the weeds until it reached the open pocket of water where the fish had taken his feeding position. He immediately responded but not with the blitzkrieg fury with which he attacked the damsel fly. He merely made a lunge at the deer hair deception and carried it back under the weeds. In trying to rake the weeds aside another pickerel of equal proportions ran for safer cover. After having landed the fish we sat on the bank to smoke while the pool quited down. After about a half hour we tried for the remaining fish we we had seen, using bass bugs, spoons, small plugs and what not, but to no avail. Later that day we returned and tried again with like results which illustrates the fact that pickerel are not alway "just too easy to catch." Pickerel lures should at least bear some remote resemblance to their natural forage which usually consists of stone catfish, frogs, minnows and large insects.

In the illustrations, Figure 1 depicts a bucktail sent to us by Keith Bush of Wyalusing. Keith tells us that this gaudy affair is a real killer on pickerel and he uses it exclusively. We have tried it with marked success and have also caught rainbow trout on this pattern in the smaller sizes 8 and 10. We have dubbed this fly the Keith Bush Goldbug and can certainly recommend it as a first rate pickerel lure. It is tied as follows: Tail, red feather; front half of body silver or gold tinsel; the rear half is made of black ostrich herl. The bucktail is composed of two layers, red over yellow, and the head is covered with green ostrich herl, although I simply paint the head green.

A deer hair frog or bug as illustrated in Figures 2 and 3 offers real sport when pickerel can be induced to feed from the surface. The frogs should of course be in imitation of the natural but of the wide assortment of deer hair bugs obtainable we have found a combination of red and yellow body with white wings to be especially attractive to pickerel.

Figure 4 shows a unique method of rigging up a lamprey eel imitation made of pork rind. First procure a piece of "green" that is to say uncured, pork rind from your local butcher, and cut strips to the shape shown in the illustration. These strips should be four or four and one half inches long and about one half inch wide. Punch a series of holes, through which a steel wire can be strung when about to be used. They can be used in their natural color or stained brown by placing in a weak solution of permanganate of potassium. After straining the rind it can be preserved for future use by storing in glass jars in salt brine or formalin solution. The former is the handier of the two and incidentally preserves the rind well enough for several weeks use.

Figure 5 shows the three easy steps in forming an artificial damsel fly which is a deadly lure for trout and bass as well as pickerel, when these flies are over the water and the fish are watching them closely. These large imitations should be tied on rather large hooks, the size being a matter of choice. I use them tied on a No. 4 medium long shank for the smaller sizes and a No. 2 for a larger pattern. The body of the damsel fly is formed of sterilastic (sheet rubber bandage). A strip one eighth inch wide and one and one-half inches long is cut and rolled to about the thickness of an ordinary safety match. This is cemented and bound to the hook as in Fig. 5-a. Over the bindings a piece of black chenille is tied

Fig. 1
The Kieth Bush Goldbug

Fig. 2
Deerhair Frog

Fig. 3
Deerhair Bug

Fig. 4 Lamprey Eel

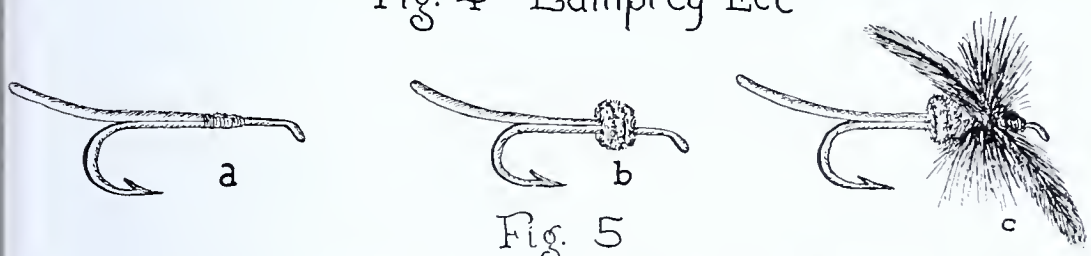


Fig. 5
Steps in forming the Damsel Fly

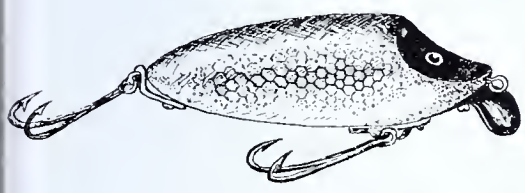
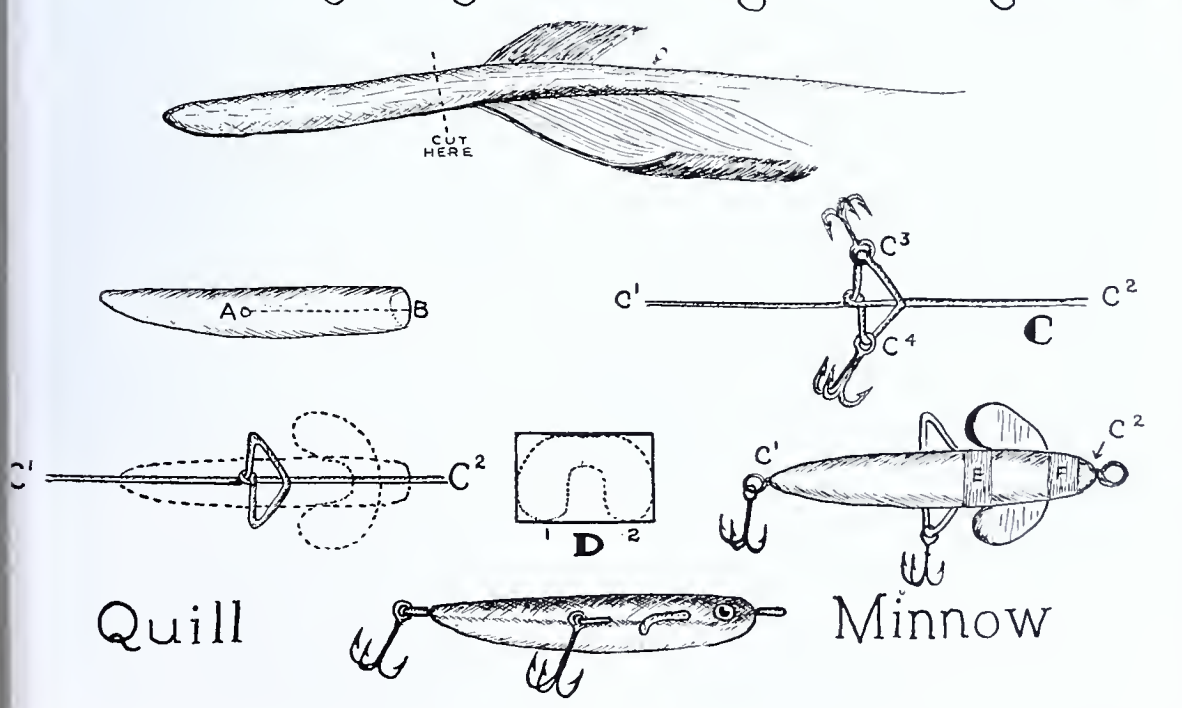


Fig. 6 Sinking Plug

Fig. 7 Wobbling Spoon



—C.L.Peters—

and three wraps around the hook will form the enlarged thorax as in 5-b. Two pairs of black hackles tied on horizontally form the wings and these are secured into position by cementing and supported by the black hackles used in forming the legs as at c. For this pattern the body should be painted a bright green color. We use a green bronze in imitation of this particular body. There are other color combinations such as the browns and grays and your stream observations should tell you just what you might need in your locality.

Figure 6 shows a popular type plug that has been used with excellent results. This small plug darts from side to side and attracts plenty of attention.

Figure 7 shows the spoon type lure which is recognized as standard equipment in various sizes for pickerel, northern pike and muskies. They come in several standard colors as well as plain silver and copper finish. Our preference is for the red and white striped spoon with the concave surface in plain burnished copper.

During the past several months we have received so many requests for additional information on the construction of the Quill minnow we described previously in the ANGLER, that we are going to try to clarify some of the details of construction of this little plug, which is a real go-getter for our game fish.

The body of this midget plug is made from the butt end of a flight feather from a goose or turkey wing, the larger the feather the better it will serve for a body. The section to be used is cut to a length of two or three inches depending on the size of the plug to be made. At a point approximately one half the length of the quill, drill a small hole as at A, entirely through both sides, then with a keen knife cut along the line AB on each side of the quill. Now bend a piece of annealed wire 20 to 28 gauge depending on the size quill being used, to the shape shown at C. The two treble hooks must be attached at C^3 and C^4 during the bending process. Insert the point C^1 of the shaped wire into the large end of the quill and follow through until the hook support wire C^3 and C^4 is solidly set in the hole drilled through the prepared quill. Enough wire should extend at the ends to permit forming rings and at the small end C^1 another hook is attached while bending the ring. This is accomplished with a small pair of round nosed pliers. At the head end allow enough room between the end of the quill and the ring to form a nicely rounded head of plastic wood, but, before sealing, the end the fin shown at D is attached. This is easily made from sheet copper or aluminum. Cut a rectangular piece of sheet metal allowing enough material to file a groove in the center the width of the quill and having enough material remaining to form the fins. Cut away the portions shown by the dotted lines in Fig. D, and file the edges smooth. The ends D^1 and D^2 are turned up in opposite directions, causing a spinning motion when drawn through the water. Drop the fin into place and bind the quill securely with fine silk thread at E and F. The quill can now be weighted by either tamping in small pieces of either plain or colored tin foil or even made heavier by adding lead filings. Cement the wire fast at C^1 and C^2 and build up the head with plastic wood. The foil and lead filings should not extend past the point marked F in order to allow room to imbed the plastic head material. After the

(Continued on Page 19)

TAKE ME, DADDY!

By FRED EVERETT

Illustrations by the Author

"Little fishy in the brook
Daddy catch 'im on a hook—
Mama fry 'im in a pan
Baby eat 'im like a man!"

THAT'S the way it used to be. But not no more, no how! You know, we grown-up boys get a kick out of that ditty because we're the daddy and we catch the fish. Makes us feel sort o' cocky and important 'cause Mama and Baby depend on us and we do it. It's sumthin'—this being the great big Daddy!

Then one day, all of a sudden, when we are starting out to be the big provider, we feel a small hand pulling at our coat tails and a little voice pleading—"Take me, Daddy?" And we look down into the eager little face and realize with a start that here is an interloper, one who threatens our complacency and dictatorship. So we brush off the hand and mutter something about "too young" or "when you grow up" whatever comes into our mind and away we hurry.

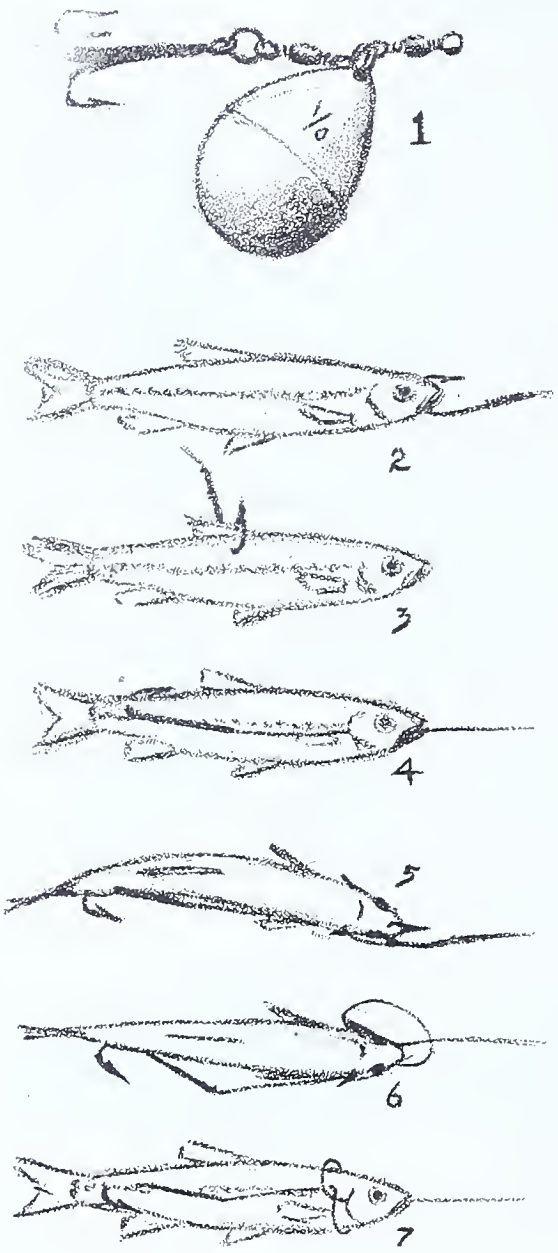
But our peace of mind is gone and we must start in to readjust our whole scheme of things. And then one day we bow to the inevitable and take the little usurper along. And find out we didn't know how much fun fishing could be until we see the look on Sonny's face when at last he is fast to his first real fish.

Did you ever see surprise, fear, worry, disbelief, breathlessness and unbounded joy all wrapped up into one glowing face? Sort of makes our mild thrill at hooking a big one pale into nothingness, doesn't it? And gives us a warmth at the heart that makes us wonder why we had put off this day. Right then and there we abdicate our dictatorship and form a democracy.

At least that's the way it was with me and I'm sure I'm just another average Daddy. Would you like to hear about that day? You might just as well say yes, because here it comes anyway.

It happened on the Delaware. You've heard of that river, haven't you? It separates—or should I say—joins New York and Pennsylvania and New Jersey and has fish in it. Real, honest-to-goodness fish, most any kind you want from trout and bass down to bullheads and eels. Big smallmouths and walloping walleyes—salmon to lots of you Pennsylvania-Dutchers. That's the kind we caught or, to be honest, he caught. I was just the guide and as you know, the guide may do all the work, select the right spots, fix up the right tackle and do all the thinking, but when the fish is caught, the guide somehow doesn't happen to show in the picture.

Well, anyhow, here's how it all came about. Gard Bump, who is Supt. of Game for New York State, invited me to bring my family to join his for a few days on the Delaware at Marks Bump's camp. This camp is on a beautiful eddy where the bass spend their summers with a few visiting walleyes. So my one great desire was to get out after them as soon as I could decently do so after unloading the car. And my son Edwin had the same idea. He was eight years old and for some reason the old excuse of being too young stuck in my throat and the words—"Come on" got out first.



While rigging up the tackle, I talked over the fishing conditions with Gard. And I got a surprise. According to past experiences, the only way to catch these wiley bass was with live bait, particularly stone cats (or small river bullheads) or dobson or little frogs. It seems that artificials just wouldn't work. So that was that—I'd have to get bait first.

Now, when someone tells me that artificials won't work I get an awful contrary streak up my back so that nothing else will do but prove it to myself. That's what happened that day. I stood there looking out over that quiet eddy and said to myself "it can't be true." So I hooked up a spinner arrangement.

Because of what happened, I know you are going to be interested in that spinner hookup. so I have sketched it for you. (Fig. 1). It was a small spinner, as I was after smallmouth bass and I believe they take small artificials best. The blade was about a 1/0, with a small 3-gang hook, either with or without the feathers. The type I like best is called the "Lowe Star" spinner. That day we used the red and white fly, 3-gang hook.

There are a number of ways of fishing this spinner. With a fly rod it can be trolled or cast by strip castings and retrieving either steady or with jerks. Or it can be cast or trolled with a casting rod. This day, because Edwin was doing the fishing, it was trolled from my bass fly rod, a 5½-oz. Bamboo Dickerson which I bought from Ray Bergman. As I knew this rod could take it, I had no fear in letting my boy use it. There is no harm to a rod from trolling such a light lure if the rod points back toward the spinner. I like this setup because once a fish is hooked there is so much more fun in fighting it on a fly rod than on a shorter, stiffer casting rod. At least it makes the fish feel bigger and that's sumpthin'!

There is one thing to remember when trolling such a spinner—don't go too fast! That means hardly move, especially if there is a current but back and forth across it, making very little headway upstream with each trip across. When going down current you must go just fast enough to beat the current to make the spinner turn. A slow-turning spinner, I believe, will take more fish than one spinning at high speed.

To get back to that day, it was decided that Edwin would use the spinner while Gard tried the live bait. This would give us a chance to compare methods. Gard used the floating method of fishing, that is rowing up the head of the eddy, casting in the bait and letting it trail behind as he floated downstream. Enough line is let out to allow the bait to settle to the bottom, where it will catch from time to time. This is especially true if the stone cat or dobson is alive, as they will fasten in under or to the rocks, often making one think he has a nice fish taking hold.

When a fish does take the bait, then one must play out line to give the fish time to get the bait well in the mouth before striking. Sometimes one could strike the moment the bass does while at others the fish will "mouth" the bait a long time before actually taking it in. To decide when to strike is one of the thrills of that kind of fishing. With the spinner, one must answer the strike immediately, although it's a fact that the fish has already hooked himself when you feel his strike.

When I find small fish are biting or for some reason I may want to release my catch, then I use another method with *live bait.* I pass the hook through the mouth and out one gill and hook the fish through the tail (Fig. 4). When a fish hits the bait, I answer the strike at once, thus hooking the fish in the mouth. This saves the danger of the bait being swallowed and hooking the fish in the stomach, which means either you must cut the leader and leave the hook in the fish or you must kill it. This hookup also helps prevent a stone cat from getting under stones.

With dead bait (or live) I like the tandem hookup for trolling or strip-casting as shown in Fig. 5. With this you first hook the bait at the tail with the end hook, then through both lips with the front hook. The hooks should be just far enough apart to curve the tail to make the bait turn over slowly when trolled or strip cast. As with the spinner, be sure to use plenty of swivels. And strike instantly when the fish hits the bait.

There is another way of hooking this bait and that is shown in Fig. 6. This is called

"sewing" the bait. Pass the hook through the mouth and out one gill. Then pass the hook through the mouth again and out the other gill, then hook it at the tail as shown, tightening the leader or snell so that the tail curves a little.

Another variation of this hookup is shown in Fig. 7. I don't like this because it leaves a knot in the leader when you fight a fish and pull the bait off. It is also called "sewing on" a bait and is done by passing the hook through the mouth, out one gill, then around the fish at the base of the gills and through the loop thus formed, then hooking at the tail, drawing the leader tight enough to bend the tail.

Some people force the hook through the mouth and down into the stomach and bring it out near the vent or up through the back as near the tail as possible. I don't use this because it leaves the mouth wide open, hindering good action.

For ordinary float fishing with live baits, the usual methods of hooking on the live minnows are shown in Figs. 2 and 3. With stone cats, I prefer Fig. 2, as it is easier to prevent the bait from getting in under rocks and better for pulling them out if they do. I also think they float better. For still-fishing with minnows the hook through the back seems to give better action but one must be careful not to hook through the backbone or it will kill the bait.

Edwin Everett

Enough of telling you what you already know—let's get back to that day on the Delaware. When I told Edwin he could hold the rod and troll, a look of amazement and joy shone through his big grin. It was just too good to be true. But there he was and believe me, he sat down in that rear seat and held on to that rod with a death grip.

It took some time to loosen him up and give him the feel of things. But kids have got more than we are willing to give them credit for and in no time at all he was sitting there at ease, playing out line and having the time of his life. Every once in a while he would catch my eye and the smile on that face was worth a million. It takes a kid to really enjoy life. Gosh—what I wouldn't give to be able to feel the way he looked! No cares—no worries—no nothing but just downright joy. All was right with the world and God was in his heaven—and so was he!

I hadn't noticed it before but it did seem to be an extra fine day. The sun was a little brighter, the breeze more soothing and the water more enticing. Even the birds seemed to sing with richer notes and—well, it was a great day to be alive. I'd forgotten that fishing was such extra fun.

And right in the midst of all those happy thoughts it happened! I will never be the same again nor could it ever have the same effect, but that time it happened with all its stored-up explosiveness.

There was a cry of mingled surprise and fright and I looked up to see Edwin clutching frantically at the whipping rod and looking at me out of big, lost-soul eyes. His face was white and his mouth opened and shut without sound. As I look back at it now, I'm not sure whether it was terror or an enchanted spell that held him, body and soul, for one awful moment.

As the color came back to his face he gasped —"I got one!" but with a hopeless look which said "What'll I do?"

I smiled down into his eyes and said "Atta boy—take it easy."

My words seemed to bring him out of his trance. Excitedly he tried to give me the live rod but I quieted him down and with as much calm as I could put into my voice, directed him in handling the rod, line and reel.

That fight lasted a long time—an awful long time to him. I gave up trying to have him use the reel. It just wouldn't work—his hands were too small to handle so much all at once. So I showed him how to hold one hand around rod and line and pull in on the line with the other hand. That did the trick although it did pile up an awful tangle of line in the bottom of the boat where his feet beat about so excitedly. But what are a few tangles among fishermen? Especially when the greatest fish of them all is at the end of one's line!

And what a fish that was! Fight—say! No fish anywhere near its size ever before or after put up such a titanic struggle. It yanked and pulled and rushed here and there as though possessed. And it tried to go under the boat and upstream and down. It came to the surface to splash the world with spray from its tail and maybe even tried to swamp the boat.

But for all its tricks and strength, my son was its match, aided by my words of caution. (I think I gave them calmly.) At last the monster denizen of the depths realized it had met its master and Edwin swung the rod tip

(Continued on Page 19)

LEADERS A LA CARTE

PART II

By PHILIP M. C. ARMSTRONG

GUT substitutes fall into two classes. The older is the so-called artificial or synthetic gut imported from Japan, and commonly referred to as "Jap." This is not really a synthetic product at all, but is prepared by covering a silk core with some glutinous matter, possibly silk worm fluid, and permitting it to harden. It is procurable in coils in all gauges from the very finest tippet stock to material heavy enough to tow a ship.

"Jap" has only two points in its favor. It is very strong, and it is very cheap. Beyond that it has little virtue. It is sloppy when wet and rigid when dry. It is slimy and slippery, so that it is very hard to tie it securely. It is subject to rapid deterioration when wet, particularly in the small gauges where strength is essential.

It may be a satisfactory make-shift for bait fishing, if funds are low, but to use "Jap" for fly rod leaders can lead only to irritation and grief.

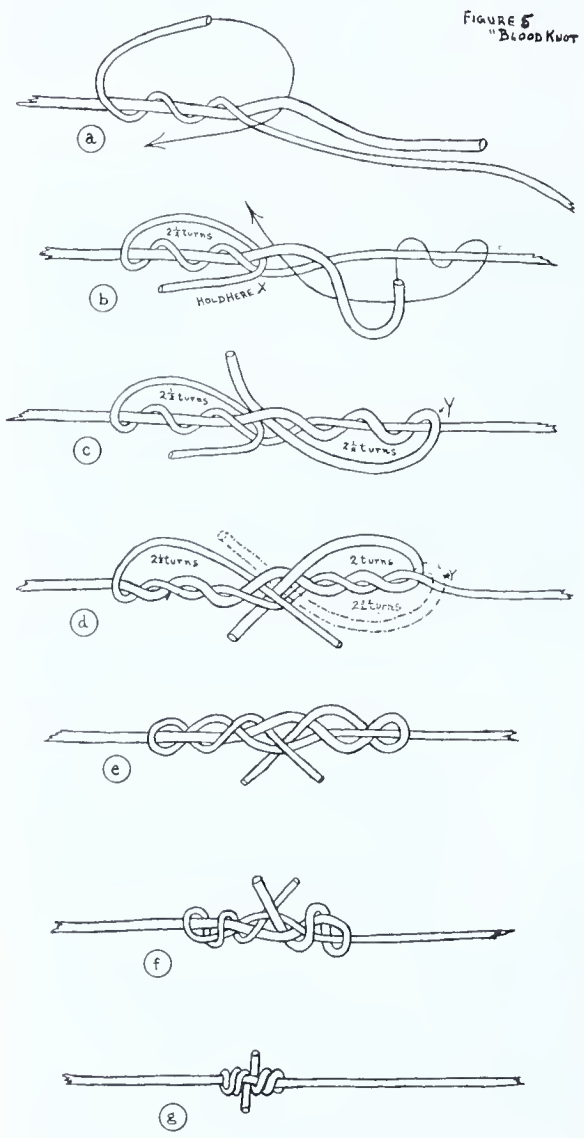
The newer gut substitutes are horses of another color. These are truly synthetic materials, the products of painstaking research in great industrial laboratories, and have many advantages over natural gut. Up to now there are only two on the market, Nylon and VEC, but no doubt others will appear to challenge the pioneers in the course of time.

Nylon is made by E. I. duPont deNemours and Company, and distributed by a number of manufacturer agents. It is made at present only in twenty-two inch lengths, in eighteen sizes, ranging from .005 to .022 inch in diameter. The various tackle manufacturers tie up leaders from these strands, both level and tapered, and also sell the strands as such to amateurs who desire to make up their own leaders to whatever specifications please them.

Nylon is a coal tar product of formula so complex that it is doubtful if even the chemists know exactly what it is, but its qualities are outstanding. It is superior in strength even to fresh natural gut, very greatly so in the heavier gauges, and is not subject to deterioration, wet or dry, to any measurable extent. It is not particularly affected by heat or cold, and does not appear to be influenced by light. It is absolutely uniform in quality, and runs true to micrometer gauge. It is tied and used dry; in fact it is not possible to soak to any greater flexibility than it normally possesses, but it does not set in coils as gut does when dry. Nylon possesses so many other advantages over natural gut that is is freely predicted that it will eventually displace natural entirely.

Up to now the cost is about the same as that of drawn gut, but it is anticipated that it will come down in price when the cost of research has been absorbed.

The one disadvantage of nylon lies in the fact that it requires more than ordinary caution in knotting to the hook so as to avoid slipping. Some of the knots commonly employed with safety when natural gut leaders are used are unsafe with nylon. But this is a small price to pay for its great superiority in other directions. We recommend sending for a booklet describing useful knots for leaders found secure with nylon or any other material, which is mailed on request to the company at Arlington, New Jersey. Other knots suitable for any kind of leader fibers have been published in PENNSYLVANIA ANGLER for May, in the *Fishing Annual* for 1940 and in June *Sports Afield.*



"The Blood Knot." (a) Lap the strand about six inches, holding the heavier strand in the left hand if a tapered leader is being tied. Twist one end around the other strand, making at least two and a half turns. With gut substitutes make more turns. Count the turns. Place the end between the strands, following the arrow. (b) Hold the end against the turns already made, between the left thumb and forefinger, to prevent unwinding. Now wind the other end around the other strand for the same number of turns, and in the same direction, as indicated by the arrow. Winding in the opposite direction produces the "Leader Gut Knot" or "Barrel Knot" which is more secure but harder to tie. When jammed they are hard to tell apart. (c) This is how the knot would appear at this stage if the turns were held firmly in place. However, the turns immediately equalize when released, and the loop "Y" turns over as there is nothing to hold it, thereby losing a half turn. (d) This shows how half a turn is lost. The "Blood Knot" always has a half turn more on one side of the center than on the other. The "Barrel Knot" differs in having the same number of turns on each side, as it is a symmetrical knot. (e) As the ends of the leader are pulled, the knot assumes this position. (f) The loops turn over and draw together like this. At this point, in order to save material, is is possible to push the ends backward, and again draw up the turns. (g) Appearance of the finished knot. The ends may be cut off close to the knot by means of a nail clipper.

The other synthetic gut substitute, VEC, is the result of researches in the laboratory of the Dow Chemical Company, at Midland, Michigan.

The base of the material is a patented coal tar derivative known as vinylidene chloride, from which the abbreviation, VEC is derived, and the fibers are formed by extrusion. It is marketed by Weber, and this valuable produce has already found wide distribution.

VEC is sold in coils, knotless, knotless leaders, both level and tapered, as snells on hooks. The tapered leaders go down only to about .010 inch diameter, so that for dry fly fishing tippets of another material must be tied on. The dry fly leaders marketed ready for use are made in this way.

Although at the moment it is not possible to secure VEC in the extreme light gauges, the writer was recently shown vinylidene chloride fibers lighter than any drawn gut, so it seems not unlikely that small gauge tippet material in VEC may eventually be available

VEC resembles natural gut in appearance and feel more closely than does nylon, and is much easier to knot. It appears to be very strong, in the gauges available, but more easily sheared than natural gut. Users are warned by the distributors that VEC becomes somewhat brittle in freezing temperatures, and is therefore unsuitable for winter use. The knots recommended by the manufacturer in their catalog will be found satisfactory, as well as any of those recommended for use with nylon. Care should be taken to avoid the use of knots which place a direct shearing strain on the material.

With these unimportant reservations VEC may be judged an excellent leader material, and it is expected that further experimentation will result ere long in the elimination of the trifling defects which now bar its application to some kinds of fishing.

Both nylon and VEC are valuable contributions to American independence of foreign sources of supply. In addition to their application to angling, both have many other fields in which their superiority to the products of nature is quite as marked.

As most leaders, at the moment, are still made from Spanish gut, we will first take up the use of this material. If you are planning to use nylon or VEC, pass over the next five paragraphs, as no preliminary preparation is needed with the synthetics.

Regardless of whether you use natural undrawn gut or drawn (or "Jap") it is of course necessary to reduce the normally dry and brittle material to pliable form. As most anglers already know, knots cannot be tied in dry Spanish gut with virtual certainty of fracture. It must be soaked.

If you are in a hurry warm, but not hot water may be used, but it is believed by some that this impairs the strength of the gut and possibly its keeping qualities as well. Though this has not been definitely established as fact, it is safer to use cold water, and to soak not less than two hours for complete absorption.

Strands of different sizes should be soaked in separate containers so that they will not become mixed. Tumblers or saucers may be used, but if you are expecting to tie leaders frequently it will pay to fix up a special gadget for the purpose.

Here is a good one devised by Kenneth L. Cooper, the well known fly tyer. Figure 3.

To make Ken Cooper's gadget get a piece of heavy copper wire, and merely bend it into the form of the rack shown in the cut. This will permit you to place gut of different sizes in the spaces provided by the wire loops and thus keep them separated yet conveniently in the same pan or tray. As strands of gut run from twelve to eighteen inches in length, the tray should be a large one. If it is not of rustless material the tray should be lacquered. The rack may be soldered permanently to the bottom of the tray, or braced by longitudinal wires so that it may be removed without distortion.

My own stunt is to use a large circular tobacco can lid, well lacquered on the inside, and fitted with several cloth pads like an overgrown leader box. These disks are marked with indelible ink to show the sizes, and cut with ears for easy separation. The strands of gut are merely placed between the wetted disks, each gauge by itself under the disk marked with its size. I use the leader soak above described, and can keep the gut wet indefinitely for use at any time.

It is well to select matched strands before soaking, and to assign them to their proper places in the leader, unless drawn gut is to be used, as there is so much variation in gauge that merely to take them as they come is apt to result in a mongrel job. It is, moreover, much easier to estimate the thickness and regularity of a strand when in the dry state. Many leader makers go as far as to "mike" the strands, but unless you are very fussy, or are making them for sale to others, when appearance means a lot, this seems unnecessary. You can judge closely enough by eye with a little practice.

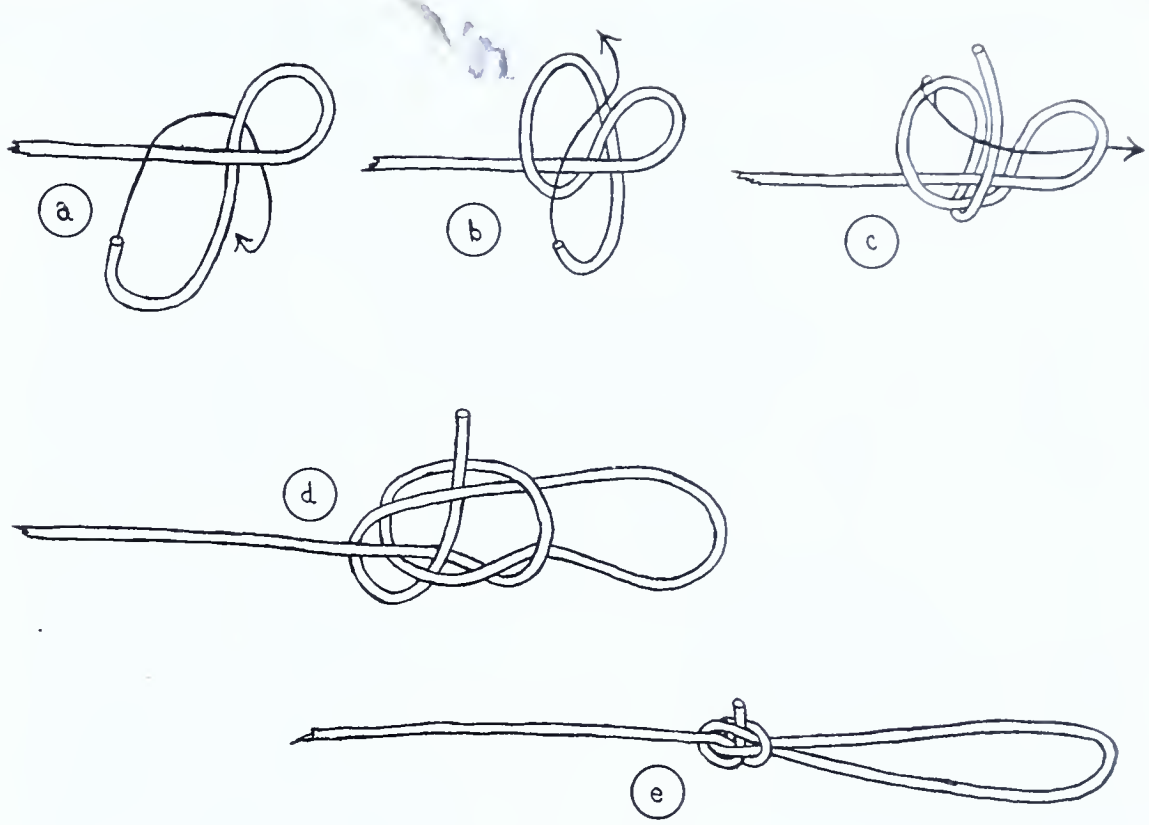
But do not fail to test each individual strand for weak spots and "flats" before soaking. Any defective strand should be immediately rejected. It is surprising how many will be found. It is well also to reject any strands which have light parts, or at least to cut the light parts out of the strands. "Flats" not only have been found to be subject to more rapid deterioration than those approximately round, but also have a tendency to cause the leader to twist in casting.

Tapered strands may be set aside for use in making up tapered leaders.

The curly ends and over-gauge parts at the ends of the strands should be cut off before soaking so that they will not inadvertantly become incorporated in the leader. Trim unmercifully if you want good leaders. With drawn gut this is of course done before you get it.

When the gut is ready for tying select the strand which will form the butt end of the leader, and tie a loop in the heavier end if there is any difference.

There are a large number of loop knots used for this purpose, but the one favored by professionals and advanced amateurs is the one known as the "Perfection Loop." The construction of this knot is shown in Figures 4a, b, c, d, and e. It is without question the best loop knot for leaders, and not nearly so difficult as it looks.



"The Perfection Loop"

To tie the "Perfection Loop" hold the gut in the left hand with the end pointing toward the right, and make the first loop as in Figure 4a. Holding this in position between the fingers, make a second turn as in Figure 4b, and carry the end upward and between the two loops as in Figure 4c. Now reach through the first loop with the finger nails or a toothpick, and draw the second loop through the first, as in Figure 4d, taking care that the end does not escape and unwind while you are doing so. Hold the loosely formed knot tightly between the fingers, so that the turns will remain in their proper positions, and pull on the standing part of the strand until they are drawn up. Then pull on the loop until it is tight. This is much easier than it sounds, but it is better to practice with a piece of cord until you get the hang of it, so that you can see how the knot develops.

The next step is to untie the strand on which the loop is tied with another strand. In the past a lot of different knots have been used for the purpose, but the ones now almost invariably employed by experts are the "Leader Gut Knot," also known as the "Barrel Knot" shown in the Dupont booklet, and the "Blood Knot" sometimes called the "Chator Knot," which closely resembles it, and which we shall describe here. (Figures 5a, b, c, d, e and f.) When tied, it is difficult to tell them apart. The "Blood Knot" is more familiar to most amateurs than is the "Leader Gut Knot."

The method of tying is detailed in the captions accompanying the cuts. The "Leader Gut Knot" differs only in that in the second part of the knot the turns are made in the opposite direction.

The "Leader Gut Knot" is probably a little more secure, but the "Blood Knot" is easier to tie, and is secure enough for all practical purposes. Take your choice; there isn't much

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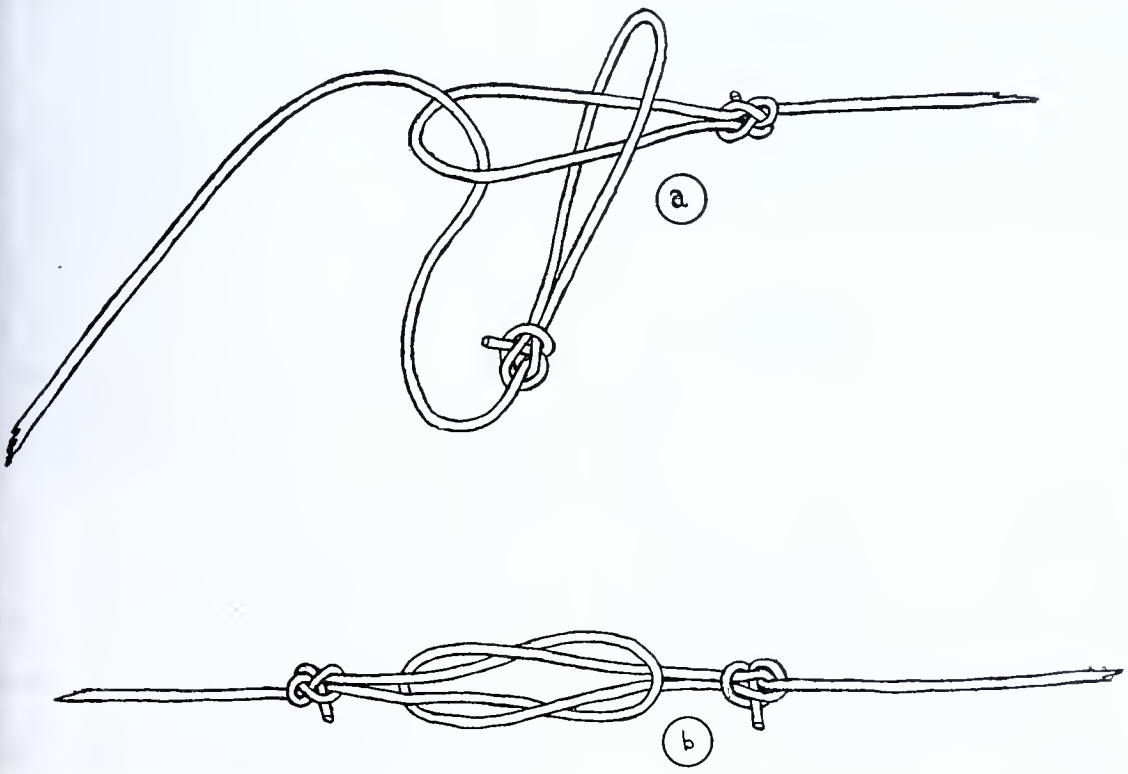


Method of attaching spare tippets to leader. This obviates tying on new tippets on the stream.

PLUGGING HEYDAYS

Notes on Autumn Fishing for Bass, Walleyed Pike and Pickerel

By ALEX P. SWEIGART

IF THERE'S one certain way to ride for a fall, it is to attempt to build up a sure-fire theory on a successful way in which to take bass or other game fish on plug, firmly establish in mind an idea of infallibility of that "system" through perhaps one successful trip astream and then base future plugging on it. Let it be said that there is no such word as "infallible" in the fisherman's notebook and for the comfort of mind of all concerned, it's a good thing there isn't. Bait casting, as a form of the angling sport, is so young that the field for innovations in it seems illimitable. It would appear at this writing that for every important advancement scored during the past two years, at least three should be in the offing.

Let us take, for instance, the use of leaders, ranging in length from 6 to 12 or more feet. For those pluggers who resorted to this practice during the past season, it is probably not necessary to outline advantages gained. During periods of low, clear water, a leader definitely increases the effectiveness of the plug. First advocated by Charles K. Fox, who stressed the importance of using the double barrel or double water knot in making the line to leader connection, long-leader plugging has won many converts in the light lure casting game. During the past summer, Fox delved deeper into use of the artificial gut leader. When extremely clear water prevailed, he found that by using the lighter ten pound test gut satisfactory results could be obtained. Gut of this test balances nicely with a nine pound test line, while fifteen pound test leaders seem to work well with both the 12 and 15 pound test lines. He regards the use of a tiny swivel, the smallest obtainable, as optional. Its advantage rests in the ease with which lures may be changed, and, of course, it is essential in handling spoons.

While on the subject of tackle, a few words on the casting qualities of light lures weighing from one quarter to one half ounce might not be amiss. To date this season, we have found the ⅜ ounce Midg-Oreno the most consistent strike getter and hooker in the kit. This goes for smallmouth and largemouth bass. The lightness of construction and wind resistance of this little lure, however, causes it to rank rather far down the line when it comes to distance casts. Of the other lures worked to date, the Dardevle Imp, one quarter ounce, in green scale finish, copper undersurface, has proved extremely deadly on stream pickerel. Its structure permits casts with comparatively slight wind resistance, hence greater distance is easily obtainable. Midway between these two in getting distance on casts is the Midget River Runt, ⅜ ounce, while Mack's Minno Bug, ⅜ ounce, a little weighted lure, is also an extremely good caster. The Shakespeare Dopey and Grumpey also are good weighted lures for greater distance in casting. Off hand, we would say that for most satisfactory fishing of the Midg-Oreno, a 9 pound test line, preferably soft braided and waterproofed, is about the ticket.

Starting on the premise that luring game fish to the strike on light lures is still at a stage of development comparable to actual knowledge of game fish and their requirements in a wild environment (admittedly, the surface in the latter has barely been scratched) autumn tendencies of smallmouth and largemouth bass, pickerel and walleyed pike are open to discussion. Of the factors that appear to have most direct bearing on these tendencies, temperature and depth of water, turbidity, time of day, and speed of retrieve of the casting lure may well be considered.

One of the best later autumn plugging streams in central Pennsylvania is Penn's Creek in Union County. This view of the stream was taken below Sampsell's Dam, located four miles above New Berlin, Union County.

Stream Bass

During recent years, particularly in dams and slow moving weedy stretches of water in central Pennsylvania, the dominance of the smallmouth bass has been definitely challenged by the largemouth. While the edge in aggressiveness still rests with the smallmouth, its cousin may also be counted upon to display those qualities dear to the angler's heart when hooked. It may well be said, however, that the smallmouth still is predominant in most stream sections hence consideration of early fall striking tendencies will center about that species.

A factor that we believe has not been emphasized sufficiently is an apparent increase in selectiveness in its foraging by the bass as the dormant period, usually some time in November, approaches. This would account for the superiority of live bait over the plug in smaller streams, noted during the past five years. As the bass stores away additional fat and tissue to carry it through winter dormancy, there is the possibility that lower water temperatures and a keener hunting instinct for the food required tend to sharpen its senses. While certainly many of our light lures are tantalizing in action, their resemblance to a darting shiner as it attempts to evade its pursuer in the shallows may be said to be remote. This applies in particular to smaller streams, such as Sherman's Creek in Perry County, warm water streams subject to drastic temperature change within periods of 24 hours. Larger streams, such as the Conodoguinet Creek in Cumberland county, the main Susquehanna River above and below Harrisburg and the lower Juniata River have consistently ranked as better bets for the autumn plugger. Apparently, larger bodies of water maintain more consistent temperatures and it will be interesting to note whether this fact holds true again this fall.

Another factor militating against success of the autumn plugger is the tendency of bass to congregate in deeper stretches of water as temperatures drop. Check up some time on the strikes you had during early July, and note how many of them occurred in more shallow stream sections where bass were cruising in search of food. With several old pluggers of our acquaintance, we have long concurred in the idea that the casting lure is always most deceptive and at its best in shallows and shallow pockets. Slow working of a sinking lure in deep water, while it gocs well with the walleyed pike, is not to be reckoned nearly so effective with the bass.

Very often, in early October, bass may be found in faster stream sections, at the bases of riffles and eddying swirls, and here it is that best results with the casting lure may be expected. Broken water seems to add to the decoy qualities of the plug in these locations and certainly is worth giving a try.

However, unless you know of a bass water fed predominantly by spring fed streams, such as Penn's Creek, in Centre County, don't pin

too much hope in productive plug fishing after the first heavy frost. Spring fed streams and lakes are not so subject to drastic temperature variation and it is believed that they are the best bets by far for the plug caster who stays with the game during autumn months. The same goes for larger streams such as the Juniata until early October.

Turbidity of water also seems to have definite bearing in taking bass in the fall. In crystal clear water frequently prevailing in September, it is a difficult task to fool a bass with senses keen for the live forage to carry it through dormancy. It will be found generally, at virtually any time during the plugging season, that murky water is far more productive of good bass catches. In milky water, the flashing dart of a good action lure on the retrieve is one of the deadliest deceptions for his highness, the small-mouth bass.

Time of day enters strongly into the autumn bass fishing picture. On a day with a hot midday sun, some of the best sport attainable with the casting rod is to be had during that period from 11 in the morning until 2 in afternoon. Recognizing the tendency of bass to enter deeper water in the fall, it is a good idea to slow up somewhat on the retrieve of the lure letting it settle well to the time of starting the retrieve.

Autumn fishing for bass is a moot subject insofar as the bait caster is concerned, and for that reason, it would be a great idea for those fishermen who engage in it to compile all available notes on conditions encountered when a good catch was made. Off-hand, we'd say that a better key than any obtained to date should be found before the bait caster can obtain the best possible results with his lures on bass when autumn tints the leaves.

Pickerel

We hereby nominate the chain pickerel as the ace bet for the autumn plugger on Pennsylvania streams. Dropping water temperatures seem to stir it to a frenzy of activity. It is to be observed, in this connection, that both the pickerel and walleyed pike are early spring spawners, dropping their eggs usually in late March or early April, and these eggs are fairly well developed in the female fish by late October. While it is true that neither species goes into a period of dormancy during the winter months, extremely low water temperature in winter in ice-locked streams very probably has its effect on curtailing their food taking. As a result, while minnows and other forage fishes are available in good numbers during the autumn months, the pickerel goes on its most intensive feeding spree of the year and plugs fished in waters where it occurs very often yield gratifying results. From the angle of gameness, a stream pickerel taken in autumn is a first rate fighting fish in every sense of the word. Its swift underwater rushes, and in some instances, breaks from the surface would do credit to much higher rating game fish. Taken on light tackle, it is capable of providing great sport.

In autumn fishing to date, the spoon has been found to rank high in pickerel taking qualities. In addition to the Lou Eppinger spoon described earlier in the article, the following finishes have proved excellent: red and white, black and white and perch scale. Equipped with a single hook and sparse bucktail, this spoon is a good hooker. The Midg-Oreno has also been found an excellent pickerel lure, with the green scale, pike scale, red head and white body and red head and yellow body finishes productive, while in deeper water the Midget River Runt in red and white and shiner scale finishes may be tried to advantage.

This four-pound creek largemouth fell to the midg-oreno.

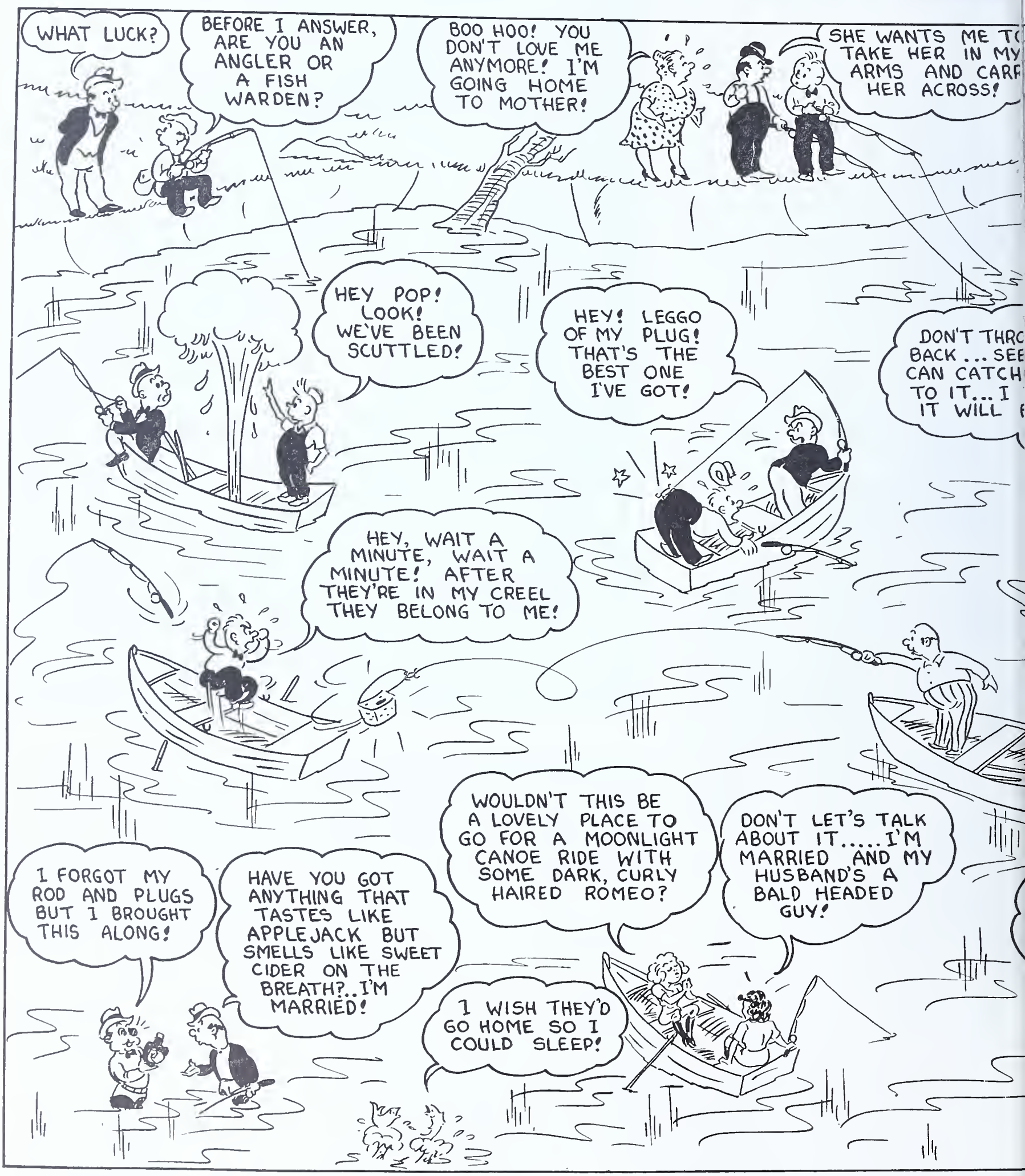
By late October and early November, pickerel in common with the bass tend to congregate in deeper flats and pools. Old mill dams, with their lily pad fringed shores and pockets, annually yield some of the finest pickerel taken in central Pennsylvania waters. One of the most appealing phases in pickerel fishing is the abandon with which they strike the lure when in a hitting mood. To see one of these long graceful game fish following a lure in clear water, striking at it again and again, and sometimes connecting with the hook virtually at the tip of the rod is one of the most exciting experiences a caster can have, particularly if the fish is well up in the poundage rating. Incidentally, while the average run of pickerel is from one to two pounds in weight, fish of the species are occasionally taken in our waters that scale five pounds or heavier. A constant threat in losing big pickerel is the tendency of the fish to cut the leader with its sharp, inward curving fangs, and care should be taken to play heavier specimens with as little forcing as possible.

Walleyed Pike

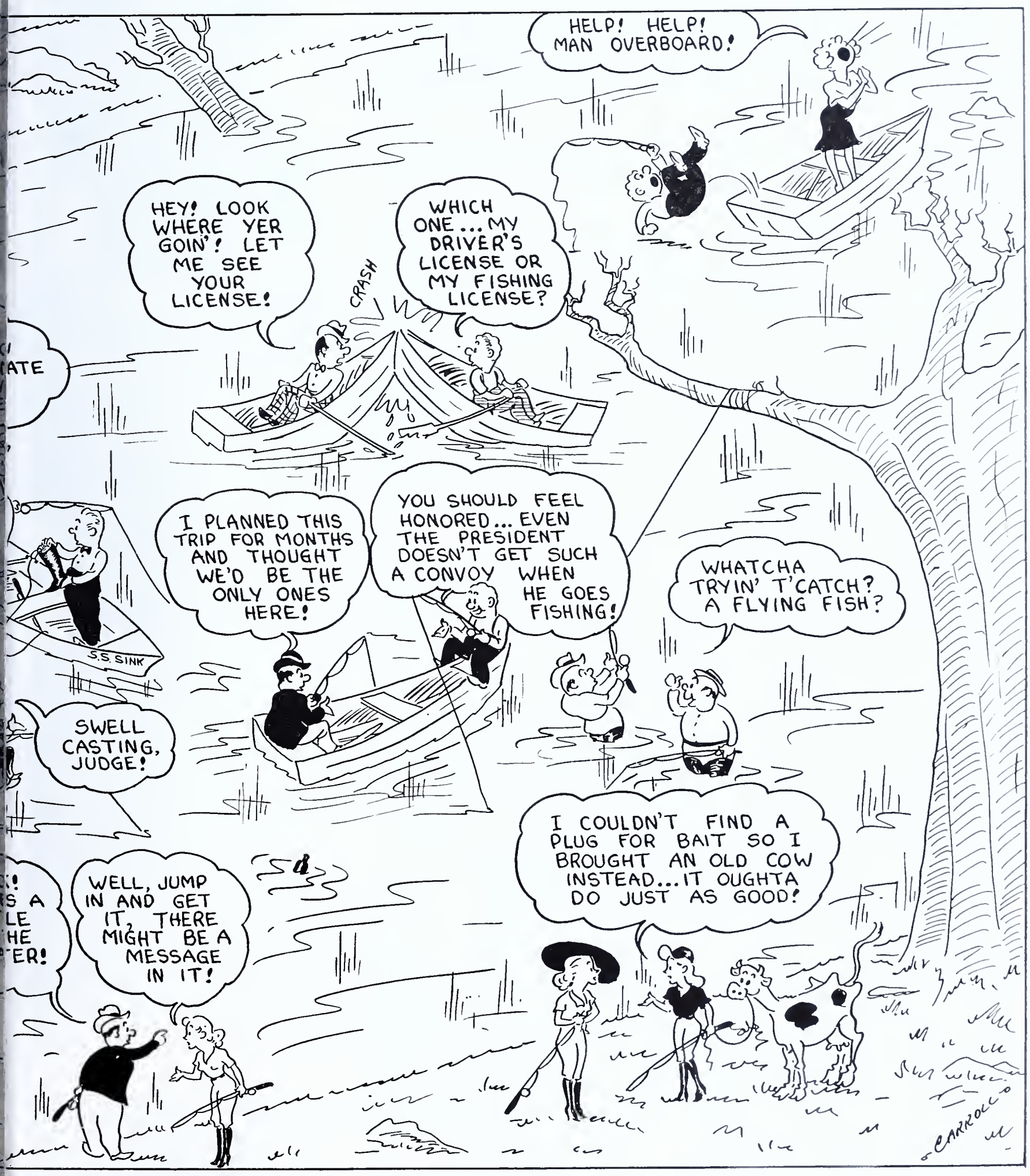
Successful fishing for the walleye may be said without exaggeration to extend to close of the season for this fish on November 30. Some of the best catches of big walleyed pike are scored during November and while plug casting will be found effective, the old fashioned trolling method is hard to beat in stream or lake. While this article deals primarily with plug fishing, a few words on successful trolling methods may not be amiss. Long a favorite with trollers on the watersheds of the Juniata and Susquehanna Rivers is the June Bug spinner and nightcrawler combination. This usually consists of a swivelled wire leader attaching to the line, a broad bladed spinner of copper and silver finish and a long shanked hook to which is attached a flexible light wire. After the nightcrawler has been impaled on the hook, the wire is wrapped about it to fasten more securely and the tail of the big worm left dangle perhaps an inch from the point of the hook. A regulation steel casting rod, quadruple multiplying reel and line, preferably hard braided waterproof of 18 pounds test or stronger completes a good trolling outfit. The actual trolling is a science in itself and to be convinced of this fact just watch an old timer at the game in action. Vitally important to success is an intimate knowledge of stream bed characteristics. This, incidentally, goes

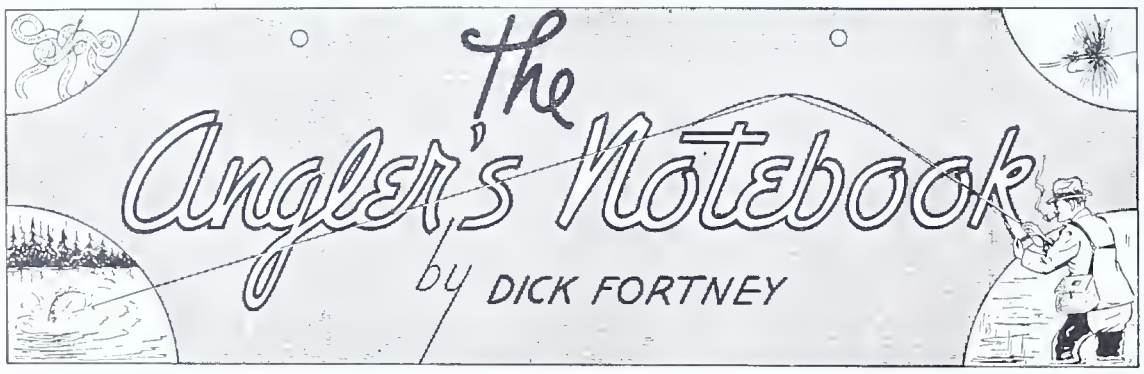
(Continued on Page 18)

BASS SE


WHAT LUCK?
BEFORE I ANSWER, ARE YOU AN ANGLER OR A FISH WARDEN?
BOO HOO! YOU DON'T LOVE ME ANYMORE! I'M GOING HOME TO MOTHER!
SHE WANTS ME TO TAKE HER IN MY ARMS AND CARR HER ACROSS!
HEY POP! LOOK! WE'VE BEEN SCUTTLED!
HEY! LEGGO OF MY PLUG! THAT'S THE BEST ONE I'VE GOT!
DON'T THRO BACK ... SEE CAN CATCH TO IT... I IT WILL
HEY, WAIT A MINUTE, WAIT A MINUTE! AFTER THEY'RE IN MY CREEL THEY BELONG TO ME!
I FORGOT MY ROD AND PLUGS BUT I BROUGHT THIS ALONG!
HAVE YOU GOT ANYTHING THAT TASTES LIKE APPLEJACK BUT SMELLS LIKE SWEET CIDER ON THE BREATH?.. I'M MARRIED!
WOULDN'T THIS BE A LOVELY PLACE TO GO FOR A MOONLIGHT CANOE RIDE WITH SOME DARK, CURLY HAIRED ROMEO?
DON'T LET'S TALK ABOUT IT..... I'M MARRIED AND MY HUSBAND'S A BALD HEADED GUY!
I WISH THEY'D GO HOME SO I COULD SLEEP!

ON'S ON


HELP! HELP! MAN OVERBOARD!
HEY! LOOK WHERE YER GOIN'! LET ME SEE YOUR LICENSE!
CRASH
WHICH ONE... MY DRIVER'S LICENSE OR MY FISHING LICENSE?
ATE
I PLANNED THIS TRIP FOR MONTHS AND THOUGHT WE'D BE THE ONLY ONES HERE!
YOU SHOULD FEEL HONORED... EVEN THE PRESIDENT DOESN'T GET SUCH A CONVOY WHEN HE GOES FISHING!
WHATCHA TRYIN' T'CATCH? A FLYING FISH?
S.S. SINK
SWELL CASTING, JUDGE!
I COULDN'T FIND A PLUG FOR BAIT SO I BROUGHT AN OLD COW INSTEAD... IT OUGHTA DO JUST AS GOOD!
WELL, JUMP IN AND GET IT, THERE MIGHT BE A MESSAGE IN IT!
CARROLL



IN the deep water in which bass are found in the late weeks of the fishing season, the fly rod has a distinct advantage over the shorter rod for use with flies, other light lures, and bait. The reason is that the fly rod is better able to impart to the lure or bait that necessary "live" action which attracts fish of good size.

When frosts come bass move from the shallows into the deeper water to do most of their feeding. You will have to follow them there to enjoy autumn bass fishing.

Brightly colored bass flies, fished wet, are fine autumn lures for pickerel.

The fishing season is ending, so give some thought to the storage of tackle during the winter. Bamboo rods should be kept in a room which is not heated but which is dry. Silk and linen lines should be washed in clear water. Flies and other feathered lures should be put in airtight boxes. Waders and boots should be cleaned and put where neither dampness nor heat will damage them. And a bit of paint will check the rust spots that appear on the tackle box.

When fly lines are to be stored away, take them off the reel and coil them on a spool six or eight inches in diameter. This will keep them from setting into small kinky coils.

To preserve those favorite bass and pike plugs of yours, give them a good coating of automobile or floor wax.

Put flies and similar lures, which might attract moths, into a tightly closed box or glass jar, and if you don't want to go to the trouble of buying a moth-proofing compound just break up a good strong cigar and put it in the container with the flies. A cigar is as good as mothballs any day of the week.

The pork rind lure is the safest to use in waters which are choked with weeds and lily pads, and often bass are found only in those spots where unprotected lures are sure to become entangled. The wriggling pork rind makes the hook virtually weedless.

With either live or artificial lures, care must be taken to keep them free of weeds and other debris that may cling to them in the water. Fish will not take bait which is dragging foreign matter with it.

Every angler who has used a fly and spinner has seen fish follow the lure but refuse to strike it. In such a case try stopping the lure and then starting it sharply. The fish, apparently thinking that food is about to escape, often will strike viciously.

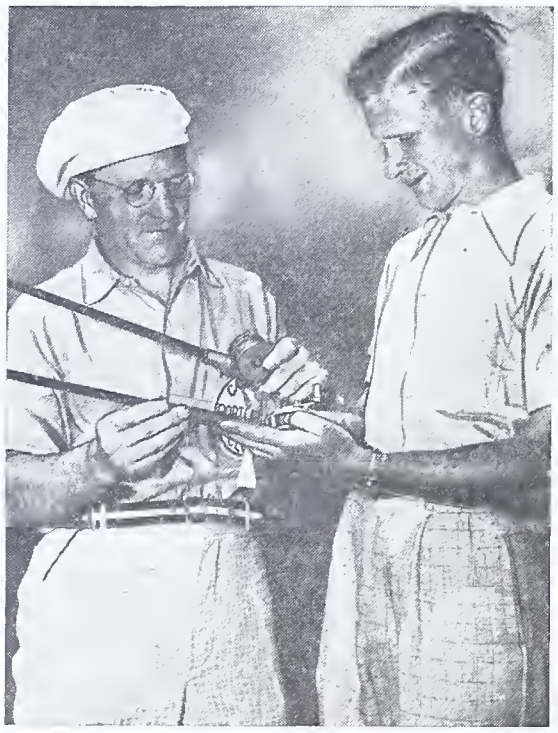
Red is an outstanding color for a bass lure, whether it be a fly, a spoon, or a plug. There is something about the color that seems to make bass fighting mad.

Holes cut in the ice will save fish during the winter if they are of considerable size and cut in the general direction in which the wind usually blows. The action of the wind in keeping the water in motion speeds the normal process of absorption of oxygen from the air. The holes should be kept clear of ice all winter.

Winter is a good time for the angler to clean and polish his fly lines and all his other equipment. But lines especially need attention. During the fishing season they accumulate grit and other dirt which will shorten their lives unless it is removed. The line may be washed with mild soap, rubbed with paraffin, and given a final treatment with a commercial line dressing.

With the exception of black, all silk darkens when varnished, so no matter what color you select for windings on a silk-wrapped rod, it should be one or two shades lighter than the final color desired.

Tips on steel casting rods are soldered on, so that the solder has to be melted before a broken tip can be replaced.



There still is time for some final thrills in fishing as the autumn makes its appearance. The expert with the casting rod finds bass and fish of the pike family feeding vigorously during frosty days.

Durned ef I ever seed so menny pike in our crick as is there this yere. An' jist ez plenty ez the pike is the bass is scaire. Furst o' all, the bass hatch in our big crick wuz jest erbout nuthin'. Mebbe it wuz the lait spring we hed an' water wuz too cold er sumthin' but I'm asayin' thet onless the bass starts a cumback rite soon we'll be in fer sum tuff fishin' next yere. Funny thing erbout these here pike, Elick. Reckalect ez how we talked over the way they'd cum an' go in the crick fer the past 20 yeres not so long ago. Well, by gorry, looks like there mite be sumthin' in figgerin' thet when bass gits plenty, pike gits scaire an' t'uther way round. Then agin, I bin notin' thet when weeds gits so consarned hevy in the crick ez ter almost choke the flats, pike cums rite along with them. We got more weeds this yere then I seed in yeres an' seems like every weed plout hez a pike, er pickerel, ez they call 'em ritely astickin' in it. Sum o' the critters ain't much more'n 10 inches long, but they shure hev bin gittin' plenty. Mebbe, tew, it's becuz the minnies is so plenty. Now, a pike jest likes a nice fat shiner er chub er nigger chub better'n most ennything. Jest a look at them long duckbill jaws an' teeth like a cat's is all a feller needs ter figger thet when a minnie is hit it's goodbye minnie. Them pike is fast ez litenin' an' the way they kin ketch a minnie is sumthin' ter watch.

Yeres back, when the bass wuz so plenty in the crick thet a feller ud see schools o' frum 6 ter 10 big fellers in every flat, ketchin' a gude pike wuz sumthin' ter rite home erbout. I reckalect thet in a day's fishin', 1 pike fer every 6 er 7 bass caught wuz a durned gude average. Rite now, I'm ketchin' erbout 2 er 3 pike ter every bass. Reckon they's nuthin' a big bass likes better'n a yung pike an' now thet we're seein' so durned menny pike o' a size thet wude be jest rite fer this yere's hatch, seems like thet's sum sorter prufe thet the bass ain't rite plenty in our crick. Anuther thing, the pike I bin ketchin' so fur is jest rollin' in fat so they mustn't be hevin much competishun fer the feed in the crick frum the bass.

On his first plugging trip, Alfred Deisenroth of Wilkes-Barre took a nice walleyed pike in the North Branch of the Susquehanna River recently. The walleye was slightly over 20 inches in length and tipped the scales at nearly three pounds, according to Warden Russell Womelsdorf of Kingston. Lure used in making the catch was surface plug.

Question: I am interested in fishing for pickerel. Would you suggest some waters in the state where good sport might be had with this fish? How are plugs and spoons as casting lures and what type spoon would you suggest? —M. W.

Answer: The northeastern counties, Pike, Wayne and Monroe, with their ponds and glacial lakes, may be truly said to be the heart of the pickerel range in Pennsylvania. Good contact points from which to base fishing operations in these counties would be Milford, Pike county, Stroudsburg, Monroe county and Honesdale, Wayne county. Wayne county, with its many ponds, should offer some excellent fall fishing this year for chain pickerel. The pickerel belt also extends southwestward through the central part of the state into Bedford county, and some pickerel are also taken in southeastern counties. However, laurels must deservedly go to the northeast with this species. Small plugs, weighing around half an ounce and of the wobbling type, have been found effective in taking pickerel, but greatest success to date this year has been found with the lighter spoons in black and white, green and red and white finishes. The structure of the pickerel's jaw is so light that it is torn easily. For that reason, a spoon equipped with single hook built in is to be greatly preferred over one with a double or treble hook attached by a ring to the spoon. Just enough leverage is afforded by the dangling spoon for a pickerel in its first lunge to loosen the double or treble hook and then shake the spoon with its snappy head shaking. Particularly is this the case with stream pickerel which are often surface breakers of the first water.

Question: Is it permissible to troll from a boat equipped with an outboard motor?—J. D. P.

Answer: Trolling from a motor driven boat is not permitted under the Fish Law. There is nothing in the law, however, to prevent a fisherman from using an outboard to get to water in which he intends to fish, so long as he does not cast or troll while the motor is in operation.

Question: Do watersnakes actually swallow their young to protect them as has been claimed? Are the young of this snake born alive or hatched from eggs?—J. S.

Answer: One of our keenest herpetologists and an expert on Pennsylvania snakes, Paul L. Swanson of Polk, has expressed the belief that there is nothing to the contention that watersnakes will, on occasion, swallow their young. The common, or banded watersnake, is perhaps the outstanding predator on fish life in our waters, owing to its abundance. It brings forth its young alive, usually in late August or early September, and the number in a litter may vary from half a dozen to as high as 40 young snakes. They are usually quite active immediately after birth and fortunately, their number is radically reduced by many birds and even fish at this stage.

Question: Have noticed in streams where watercress is plentiful, there are literally thousands of shrimp to serve as food for trout, also that the trout in such waters are usually highly colored and in good condition. Would it be possible to plant watercress in streams where it does not occur at the present time with much success?—A. W.

Answer: Nature has apparently limited this vital form of aquatic vegetation in distribution to waters in which it is particularly suitable. Usually, watercress occurs in streams in limestone districts, hard water streams having a fairly high content of calcium. For that reason, it is probable that attempts at transplanting the cress would meet with failure.

Question: Have been using an 18 pound test hard braided silk casting line in casting light plugs, but fail to get much distance and find the procedure not very satisfactory. What test line would you suggest for this type of plugging?—J. B. L.

Answer: Nothing over 15 pound test and preferably 12 pound or 9 pound test lines should be used. You will also probably find that soft braided, water-proofed lines will assist you in getting distance and a greater degree of accuracy in your casts.

Courtesy Allentown Call
Joseph Miller of Allentown displays a fine 17-inch smallmouth bass taken on nightcrawler. It weighed two pounds 4 ounces.

COPY OF STATEMENT AS FILED WITH HARRISBURG POST OFFICE
SEPTEMBER 13, 1940

Statement of the ownership, management, circulation, etc., required by the Act of Congress of August 24, 1912, of PENNSYLVANIA ANGLER, published at Harrisburg, Pennsylvania, for October, 1940.

Before me, a notary public in and for the State and county aforesaid, personally appeared Alex P. Sweigart, who, having been duly sworn according to law, deposes and says that he is the editor of the PENNSYLVANIA ANGLER, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse side of this form, to wit:

1. That the names and addresses of the publisher and editor are: Publisher, Commonwealth of Pennsylvania, Board of Fish Commissioners, Harrisburg, Penna.; Editor, Alex P. Sweigart, Harrisburg, Penna.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) Commonwealth of Pennsylvania, Board of Fish Commissioners, Harrisburg, Pennsylvania.

3. That the known bondholders, mortgages, and other security holders owning or holding one per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholders or security holder appears upon the books of the company as trustee or in any fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affidavit's full knowledge and belief as to the circumstances and conditions under which stockholders ad security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affidavit has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds or other securities than as so stated by him.

Signed: ALEX P. SWEIGART.

Sworn to and subscribed before me this 13th day of September, 1940.

Signed: GEORGE B. KIRSCH.
Notary Public.

My Commission expires March 9, 1943.

This 22-inch brown trout weighing 4 pounds, 4 ounces was taken in Spring Creek by Tom Forsythe of Harrisburg. Lure used was a bucktail. John Lenhart of Harrisburg holds the fish.

Visiting Special Warden Reports Allegheny Trip

Blawnox, Pa.

Dear Editor:

The Visiting Special Fish Warden made his way up the Allegheny River Valley to Springdale, Pa. This town always has had lots of fishermen. G. M. Hawk's Hardware & Sportsmens Shop was always the place to meet up with fishermen. Many were the fishing trips planned. Fish caught over again the following winter; lures that were most successful were discussed and how to use them. G. M. Hawk (now deceased) would never think of going out fishing unless he had as many fellows along with him as wanted to go out and try their luck on trout streams or river fishing. "Why not start a club?" he thought. So in October 1929, the club was organized.

The early records of the club are not very complete; but we know R. W. Smith was elected President, G. Hawk Vice-President, C. Mountain range officer, H. W. Fields joint duties of secretary and treasurer, C. J. Barrett County delegate. Some of the charter members: H. W. Brown, T. D. Montgomery, W. H. Lampus, J. C. Grooms, W. C. Davis. (from this handful of men the club now has a membership of 190.)

Then the Springdale Borough put in a new water system. The old reservoir, a couple of miles out of town, was abandoned. The Springdale fellows got together, received permission to stock the reservoir and the fish commissioners sent fish trucks four different times. They named the reservoir Springdale Lake.

I visited the lake two years ago, the evening before opening day. I never saw so many scout puptents pitched at one fishing place. This lake at that time was the nearest place to fish that boys from Pittsburgh had. The Springdale District Sportsmen Club sponsors the Boy Scouts. How boys can talk, especially the Boy Scouts, with all their signals. They just handed out the invitations; Come out, fellows, and fish in our lake! I talked to three scouts that had their tent up, fishing gear all rigged up. I guess, Editor, they figured, no use trusting the trolley cars, I may be late, I'll just stay there all night. "Well, fellows, it looks like it is going to be a swell day tomorrow; clear night, lots of stars, the fish sure will bite." One lad answered, "Boy, I can hardly wait until 12 o'clock." "Don't tell me you are not going to get any sleep tonight?"

"Not us!" they answered, "We are going to start right in after 12 o'clock and fish and fish. Our dad is coming back for us after work tomorrow evening."

Springdale Lake, looking north.

WHIPPING THE ROD

By C. V. Johnston

I'll tell you a little story of a fisherman so stout,
Who likes to wander 'long the streams and whip the rod about.
As soon as winter breaks her back and nature makes new sod,
You'll see him down along the creek, a'whippin' with his rod.

He likes to hear the running stream, and hear the song of birds,
There's something in the country air you can't describe in words.
There's something in this fishing job, that eases up the strain,
Of struggling for the dollar—and he likes it sun or rain.

His old felt hat is filled with flies in the band the whole way round,
His well worn garb from foot to head is the color of the ground;
And many pleasant hours he spends, before his homeward plod,
But he's had good entertainment, while whippin with the rod.

"Where are you boys from?"

"Woods Run, located below Pittsburgh, about twenty miles from Springdale."

So it went from one camping group to another. They came from in or around Pittsburgh. The Springdale fellows could not have done a better favor for these youngsters than providing them with fishing grounds. (Pittsburgh now has Carnegie Lake and Panther Hollow Lake for the boys and girls who like to fish; Blawnox Sportsmens' Club had Rogers Bay stocked by the Fish Commissioners.) We must get more Lakes and Ponds and get these youngsters interested in one of the healthiest of sports—fishing.

Springdale Lake, looking south.

Springdale Lake takes the boy's fancy; they can camp there, nestled in between two hills, away from the main highway, and they can catch plenty of fish. The men are charged 25c for parking their cars, whether there is one or five fishermen in one car. The lake covers forty acres and is thirty feet deep at the breast. Good drinking water and restrooms are provided.

The Springdale District Sportsmen are now meeting in the Springdale Hose House. They are planning a new clubhouse which will be forty feet wide and seventy-five feet long, with full basement to be used for a shooting range. The main hall will be used also by the Boy Scouts and for social activities.

The present officers of the club are:

J. C. Fritz .....President
H. Gray .....Vice-Pres.
A. E. Martinek .....Recording Secretary
B. G. Hubner .....Financial Secretary
T. D. Montgomery Allegheny County Delegate
H. H. Lentz Allegheny Co. Alternate Delegate

The Springdale District Sportsmen's Club is always out for new members. Any of the above members may be contacted by postcard or letter—simply address Springdale, Pa.

My visit was signed off with a big fish fry and refreshments. A fly rod, casting rod, landing net, creel, and a plug were the prizes given away that night. Also movies were shown. All this for a fifty-cent ticket. It does not cost one much to have a good time with the Springdale District Sportsmens Club, does it, Editor? Dues to the club are only one dollar per year.

Your Visiting Special Fish Warden
A. J. Socher

Stocking Springdale Lake.

SOMERSET SPORTSMEN SPONSOR DISPLAY

The Meyersdale Sportsmen's Association, a newly formed Somerset County wildlife club was responsible for the display shown above which was exhibited at the county fair this year. The center of attraction constituted a metal tank holding several large brook trout, one of Pennsylvania's native fishes, and the expense of putting on the show was defrayed by chancing off a fine shotgun.

The water in the tank was changed periodically and constantly circulated by an electric pump, being aerated much in the same manner as in the tank trucks used by the Fish Commission to distribute fish for restocking.

A county fair being an ideal place for sportsmen to meet and discuss common problems with farmers, the Meyersdale club secured leaflets of several kinds from the Fish and Game Commissions to hand out to those interested. Landowners promised to report to the association any violations of the Fish Law occurring on streams adjacent to their lands, and the club pledged protection of these streams through its Special Fish Warden, Lee Imler, who has been devoting nearly all of his spare time to this job in the absence of a regular fish warden.

Up to this time, the Meyersdale Sportsmen's Association has confined its efforts to forming a strong organization, affiliating with the Pennsylvania Federation of Sportsmen's Clubs and seeking better relations with nearby groups, but choosing the county fair as their "coming out party," Meyersdale wildlife enthusiasts launched an active program to teach forest and game conservation and to stop the pollution of county streams.

Committee members who spared neither time nor effort in making the fair display the success it was are: Harold Hoar, Lee Imler, Dave Weisel, Paul Christner, Merle Tressler, Donald Reis, Dave Ellis, Artha Shumaker and John Livengood.

Splendid exhibit of the Meyersdale Sportsmen's Association.

LANG WINS KNIGHT TROPHY

Nelson Lang, Millvale precision caster, headed the list of contestants at Carnegie Lake, Highland Park, to capture the Knight trophy, emblematic of the championship of the Pittsburgh Casting Club in the annual tourney. Nelson's casting netted him the all-around championship and he scored a 380x400 to take the trophy offered for the first time.

The dry fly accuracy cast went to Lang with a 94 score and he also won the 5-8 ounce plug accuracy casting event with a 95. The 3-8 ounce accuracy cast event went to the veteran C. W. Ward with a 99 point score. Val Breitenbach captured the wet fly accuracy event with a 97 point score.

KEEPING FISH FRESH

Observes Frank Mathias *of the Carnegie Sportsmen's Association:*

Providing one of the most excellent foods at our command, fish must be well taken care of and must be fresh before they are prepared for the table. All too often the fish that are brought home by the fisherman are far from fresh. They may have lain in the boat, exposed to the sun, or may have dangled dead on a stringer in the water for a full day. A small wash-tub, about two feet in diameter with some ice and sawdust in it to prevent rapid melting will keep panfish in good condition for over a half day. The ice can be replenished. It is a handy idea to use in a boat. A hundred pound gunny sack, or, better yet, a quarter-inch mesh, large-sized onion sack hung over the side of the boat will keep bass and other fish alive and fresh. If the weather is too hot and fish die in the water, do not hold them too long but kill them, remove the entrails and heads. Do not wash but wrap in cloths soaked in ice water from your thermos jug, the cloths having been wrung out. Now wrap the fish, each separately, in a piece of newspaper, in such a manner that it will be completely tucked in so that no air can enter the package. Fish will keep in this manner for a day or more in hot weather. Never let fish die in a pail of water, the common failing. And again, never clean fish and let them stand in water. This is still more commonly done. When fish are cleaned, dry them, place on a platter in a pan and set away on the ice or in a cool place, well covered.

Kennerdale Eddy on the Allegheny, dandy bass water. The view is from Lookout Point.

"I can't decide whether to get it mounted or keep it for bait!"

PLUGGING HEYDAYS

(Continued from Page 11)

for plug casting for walleyes as well. An expert troller usually knows accurately the channels, ledges, spring holes and shallows characterizing most Pennsylvania walleye waters. Equally important is timing of pace at the oars of a boat. It has frequently been a source of amazement to us, while watching one of these angling veterans rowing his boat at a snail's pace, how he managed to keep the lure from snagging on the bottom. Often the trolling system preferred seems to be that of rowing over a given stretch of water in ever narrowing circles with from 30 to 60 yards of line behind the boat. When a walleye is struck the spot is noted mentally and usually a return over that location will result in another strike as the walleyes are definitely school fish. Other types of trolling include a crisscross system and straight up and down stream.

In plugging for walleyes, lures weighing ⅜ to one half ounce, preferably fast sinkers of the wobbling type have proved highly effective. We have found the Midget River Runt in Shiner Scale finish, the regulation half ounce River Runt, and the Go Deeper River Runt excellent lures in this type of plugging. Two factors are highly essential in plugging for this fish, making certain that the plug on the retrieve is well down in walleye range, that is, virtually grazing and occasionally bumping on the bottom and very slow reeling in retrieving the lure.

Very often, in plugging for walleyes, the fish will follow the lure from deep water virtually into the shallows before striking or passing it up. This tendency has been noted particularly during the past season. If the walleye follows a plug to a point at which it can see the caster, we have noted that other casts failed to interest the fish. Speeding up the retrieve as the lure enters the shallows may sometimes result in a strike that would otherwise not be forthcoming.

As one of our best hitting fish in autumn, the walleyed pike is worthy of real consideration by the plug fisherman right to the season close on November 30. Giving waters in which it occurs a real play may yield good dividends in creels and action.

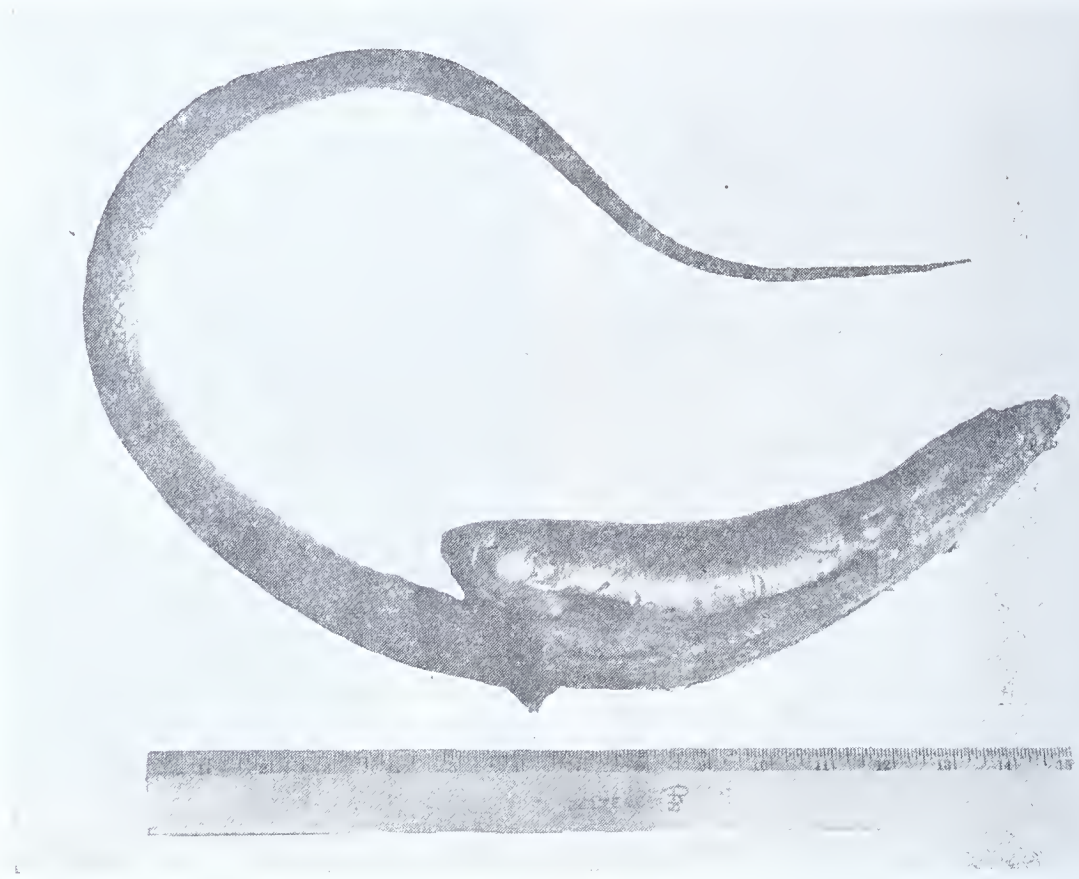
FRITZ AGAIN HEADS SPRINGDALE CLUB

J. C. Fritz was re-elected president of the Springdale Sportsmen's Club at the annual election in the club's headquarters in the Springdale fire hall.

Other officers elected were Henry Grey, vice president; A. G. Anderson, recording secretary; J. J. Martinek, financial secretary; B. G. Hubner, treasurer; W. H. Lentz, county league delegate; T. D. Montgomery, alternate county league delegate, and two year directors, John Shaw and E. H. Spix.

The standing committees will be appointed at the next meeting September 24 at 8 o'clock.

A summary of the club's past year proved it to be one of the best in the history of the organization. The officers are making plans that this year might surpass the last.



This trout caused the bulge.

FINDS 10 INCH TROUT IN SNAKE

Writes Thomas L. Beitel of Catasauqua:

While fishing the Hokendauqua Creek above Petersville one evening in July, I kicked up a large watersnake which had been lying near the stonework of a small bridge. As the snake entered the stream at my feet I noticed a large bulge above its midsection which I thought might be young ones, since I have frequently discovered six or eight small snakes in similar bulges in other snakes.

As the snake neared the other shore I removed its head with the pistol I occasionally carry for the purpose. Curious about the bulge, I skinned it about half way and to my surprise found a well conditioned ten inch brown trout in good color and evidently only a very short time removed from behind some sheltering rock.

I have caught and killed innumerable watersnakes and seen them catch smaller fish upon occasion, but I think this has been the largest. Minus its head it measured slightly over forty inches and is shown with the trout still in the membrane of its stomach, on the attached photograph, which you may find interesting enough to print in your very excellent publication, PENNSYLVANIA ANGLER.

I hope this will aid in making more of our sporting anglers "snake-wise" and conscious of the harm snakes can do to legal size fish.

STOCK BIG BASS IN PINE CREEK

As a forerunner to a program for the rehabilitation as a fishing stream of a portion of Pine Creek seriously affected by the release of poisonous mine wastes during the past Spring, the Fish Commission recently furnished a shipment of fine small mouth bass for stocking in the creek.

Brought from Lake Erie in a special tank truck, the bass, a hundred in number and averaging from 12 to 16 inches in length, with some running as high as 21 inches were placed in the stream at various points.

This was an extra assignment to Pine Creek, supplementing the stocking with bass of smaller size.

For much of its length, Pine Creek is classified as a bass stream. The Consolidated Sportsmen of Lycoming County are requesting an increase above the usual stocking to compensate in some measure for the large number of bass killed by the pollution, which has resulted in an injunction, agreed to by the mine company responsible, prohibiting further release of accumulated mine water.

W. H. Corson, chairman of the fish committee of the Consolidated Sportsmen, and Carl Bidelspacher, fish warden, were assisted in release of the fish by George Durrwachter, Homer Love, and Clyde Brown.

COURTESY FOR BOAT FISHERMEN URGED

The Board of Fish Commissioners has experienced considerable trouble on Lake Wallenpaupack in connection with motor boats operating at an excessive speed and at the same time interfering with fishermen.

Just recently, a boat came so close to several fishermen that their rods and lines were pulled out of the boat and equipment lost. Prosecution was made, at which time the defendant was found guilty and in addition to the fine, partially reimbursed the fishermen for equipment lost.

Motor boats have their place in the recreation field the same as any other sport, but there have been individuals who apparently had no respect for fishermen or persons swimming and we feel that where arrests are made of flagrant violations it will do much to clear up the situation.

Word comes from Commissioner Fred McKean, of New Kensington, that opening of the boys' fishing pond at the Memorial Park Lagoon was an outstanding success this year. On opening day, June 27, hundreds of juvenile followers of Izaak Walton fished to their heart's content in the project for which Commissioner McKean was an initial sponsor

ROD INSURANCE

(Continued from Page 3)

as to where out of the ordinary supplies may be obtained, so I do not suppose there should be any great harm in swapping information on a practical rod case for a definite purpose. Should anyone wish to address the young man in suburban Harrisburg with an inquiry, the writer will be glad to advise the former's identity. I have no interest in the venture, not a whit, save perhaps to repay some brothers of a clan always willing to assist a compatriot with words of advice and information. To quell any misgivings as to cost, it seems so reasonable as to be almost ridiculous, barely more than the outlay for the lumber, hardware and finish. However, the addition of cork or composition lining might jump the investment as much as 150 to 200 per cent

But after all the best way to acquire such a case is to build it personally. One may spend hours pleasantly engaged in such a task and profit mightily thereby. Sportsmen the nation over are a virile, self-reliant group—there is no substitute for personal achievement. In contemplating a completed masterpiece, where may one find four more expressive and rightfully proud words than the simple honest statement: "I made it myself."

FALL PICKEREL

(Continued from Page 5)

head has dried it can be sanded down to a neat finish, and the entire assembly given a coat of clear lacquer or varnish, giving special attention to the thread bindings. After the varnish has dried thoroughly the plug can be painted in imitation of your favorite type minnow. Our ehoice of colors is as follows: the top portion or back painted olive brown, with the underside cream or white. Along the line where the cream and brown meet a narrow line of orange can be blended in. The underside of the fin is painted either red or orange. An eye painted at the head completes the delusion.

Needless to say such spinning lures as the Quill minnow, and the spoon described in Figure 7, should have a snap swivel attached or a badly twisted line will result. We have repeatedly found that after other lures failed we were able to bring success by resorting to the use of the little Quill minnow.

No, we do not sell them commercially but with a bit of patience the average angler craftsman should be able to make a good looking minnow on first trial.

For this type of fishing we prefer a rod of six ounces and nine feet in length. This, with a rather heavy level "C" line makes a good combination and even handles the midget plugs well. Regardless of the type lure to be used we prefer a stout leader of at least four feet in length and preferably of the synthetic variety which can be discarded after it becomes worn and frayed.

TAKE ME, DADDY

(Continued from Page 7)

my way so that I could grasp the leader and lift the beaten battler into the boat. There it lay at last—his first big fish caught on that dreamed-of trip with his Dad. It gasped and flopped its tail weakly—a badly beaten foe.

Some day Edwin may catch 30-lb. salmon or 50-lb. muskies, but they will never be so big as that fish! It was even bigger than the first one I caught when about 7 years old. That one was so big I quit fishing to walk through the town to home and to Dad at his meat market, there to have it measured and weighed. What a day that was, with everybody eyeing me with jealousy as I walked along, dragging its tail on the ground! Fourteen inches it was—the biggest walleyed pike—and first—I had ever seen. I didn't know they could grow so big.

And now here was my son with his first fish and he had beaten mine for his was a whale of nearly 15 inches. And, of all things, a walleye—just as mine had been. Does that mean he will be a great (?) fisherman like his Dad—or even greater? I toss that one into the lap of Fate.

"Gee, Daddy, that's a big one. Is that a bass?" Asked the breathless boy.

"No, son." I said and his face started to fall.

"But I thought you said we would catch bass with that spinner" he complained, with disappointment creeping in.

"Oh", I hastened to say "but this is even better than bass—this is a walleyed pike and everybody can't catch walleyes."

"Gee, Daddy—we're some fishermens, ain't we?"

I accepted the partnership.

Two hours later we stopped fishing. Edwin had caught five bass and two walleyes on that spinner. It was one of those days that happens once in a lifetime. And Gard came in to report only one small bass on the live bait. He looked over Edwin's catch and listened to his story. Then he shook his head.

"I wish I knew how to fish like that" he said, "Why, that is the greatest catch of fish ever made at this pool." And he patted Edwin's high-raised chest. Gard knows kids too and he helped to make the boy's cup overflow.

There will never be another day like that for Edwin—or me. But there could be for other kids who are now saying "Take me, Daddy!" Go ahead, take him along—for your own sake if not for his. I would't sell that day for a million.

Neither would you!

THE FRONT COVER

Fred Everett, famous Wildlife Illustrator, depicts three outstanding bird predators on fish life for our cover this month. Atop the "No Fishing" sign is a belted kingfisher, lower left a Great blue heron and right, a hooded merganser, one of the fish-eating ducks.

LEADERS A LA CARTE

(Continued from Page 9)

to choose; but be sure to make enough turns, particularly with synthetics, and make the same number on each side of the center.

In tying a tapered leader, tie the heavy end first, as it is easier to tie knots with heavy gut, and practice helps.

When the required length is attained make another "Perfection Knot" on the other end.

Soak the whole leader again, and hang it up to dry by one end over a nail, preferably brass to avoid rust spots, with a light sinker on the other end to keep it straight. When dry it may be coiled around a tumbler or the hand for storage in an envelope. Always write the "specs" on the envelope for ready identification.

The only other knot you are likely to need in leader tying is some form of dropper loop. The one in the Dupont booklet was devised by the writer, and is a variation of the "Blood Knot" above mentioned. Another easily tied dropper is shown here, it is believed, for the first time, in Figures 6a, b, c. The method of tying is described in the captions.

In making up tapered leaders it has long been the writer's practice to make a loop joint

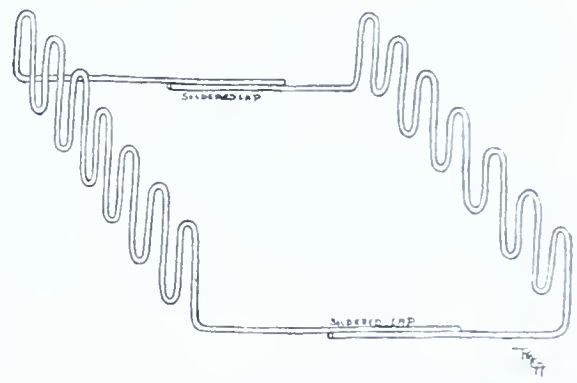


Fig. 3. Ken Cooper's Gut Soaking Rack.

between the last three strands of the fine end and the balance of the leader. This is done by making two "Perfection Loops," and joining them in the same manner as a snelled fly is attached to the end of a leader, as shown in Figure 7. Several extra two and three strand tippets are carried, and when the original end is used up or suspected of flaws a new one is substituted without having to tie any knots at all. You will like this stunt. Try it.

The knots mentioned above are all suitable for permanent fastenings. There are others, some more quickly and easily tied, which are useful for emergency repairs on the stream, but this article has already become so long that further space cannot be devoted to them in this number. If any readers are interested in learning them, please write to the PENNSYLVANIA ANGLER, and if enough want them they may be published in a later issue.

LANCASTER CONTEST RULES STRESSED

Comments Earl Keyser in his fine column Rod-Gun in the *Lancaster Sunday News.*

We are printing again the rules governing *The Sunday News* Fishing Contest for 1940 because we were forced to refuse two entries. One was caught in Maryland, and while the other was caught in Lancaster County, the owner failed to bring it into the office but reported it and offered to bring photos and witnesses. We are anxious to have entered in the contest all the big fish caught in the county this season, but for the protection of all concerned we must enforce the rules. So here they are again:

First—The prize winning fish must be legally caught in a Lancaster County stream (including the Susquehanna River within the county lines) by a resident of Lancaster city or county during the legal game fish season which opens July 1, 1940 and closes November 30, 1940.

Second—The entry must be brought to *The Sunday News* office where it will be measured by one of the judges.

MIDDLE ATLANTIC ASSOCIATION OF CASTING CLUBS

An association of sportsmen's clubs formed to promote tournament casting, encourage organization among anglers assist in conservation; and support all moves toward true sportsmanship.

Delaware County Field and Stream Association

THIS Association, at its recent meeting, took in 57 new members. At this meeting, also, Bill Reese was awarded a loving cup for having caught the largest trout reported by any member of this club during the current year. Bill's catch was a 17¾ inch rainbow. Charles Lentz and Ed Dubinick were mentioned as being the members of this club who, during the season, caught the largest number of trout, most of which they returned to the streams. They "catch 'em and put 'em back for next time," as do many of our conservationists nowadays.

During the regular business meeting in September, the officers of the preceding club year were re-elected to serve for the new club year which began at that time. For the third successive occasion, the following men were elected officers of this club: Bill Everman, President; Harry Sauers, Vice-President; Dick Newman, Secretary; and Al Deger, Treasurer. An additional office was created at this meeting, when Phil Bailey was elected to serve as Recording Secretary. Art Taylor was chosen to serve as delegate to the Pennsylvania Federation of Sportsmen's Clubs from the Delaware County Federation. Shorty Manning was selected as alternate delegate.

Upon his re-election, President Bill Everman appointed the following Committee Chairmen to serve until September, 1941: Nick Young, Property; Carl Hammill, Pistol; Chas. Lentz, Fish Propagation; Shorty Manning, Farm Game Project; Paul Herreran, Game Propagation; Carroll Glines, Publicity; Ed Richards, By-Laws and Resolutions; Hen Miller, Trap Shooting and Bob James, Archery.

Harold Lentz, former world's champion surf caster, was a major factor in winning the Ocean City Cup Event for the Dover Fishing Club.

Dover Fishing Club of Philadelphia

The next meeting of this club will be held on October 16th in the regular assembly rooms at the Philadelphia Bourse. The entertainment committee has procured for the pleasure of the members Harry Schenk's epic of sublime courage and stark drama "Beyond Bengal." This is probably the best adventure picture ever shown at one of our meetings and the showing will take over an hour. So be on hand promptly at 8:30 so we can get started on time and get the entertainment underway early in the evening.

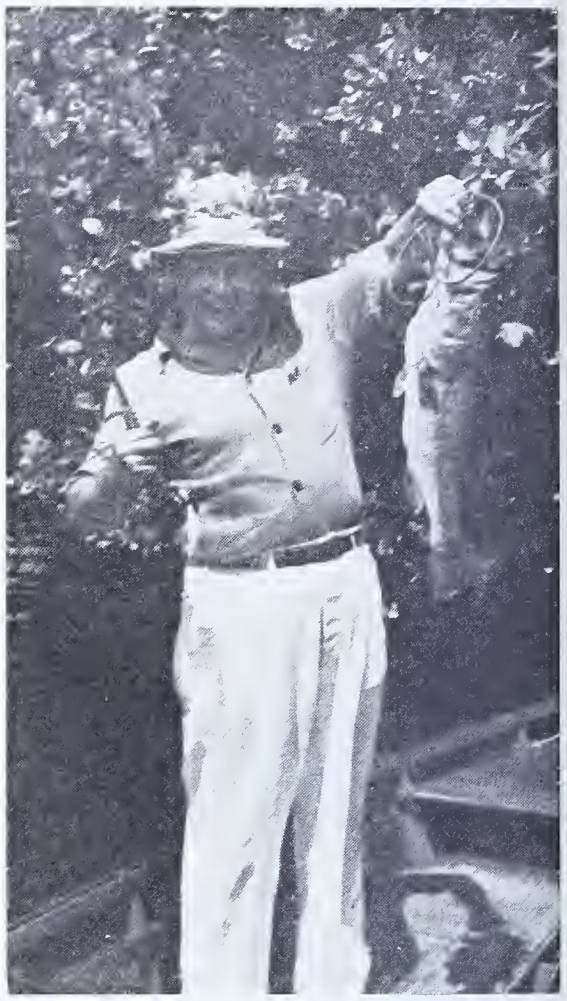
Members have been doing some pretty strenuous fishing during the month of September. Joe Willard, Doctor Hankinson and Harry Gardner report some fine catches of weakfish and croakers from the Margate Fishing Pier. Doctor Hankinson has seriously taken up aeroplane fishing; with headquarters at the Anglers Club of Absecon Island he listens for the reports of good fishing along the coast, picks out the most favorable location, jumps in a plane, and in a few minutes is right on the job where they are pulling them in.

During the first week of the month, Joe Kofka made some large catches of croakers from the 44th Street Pier at Brigantine. Albert Freck continues to haul them in from the surf at Beach Haven. Fred Bode sends in his report from Ocean City that there are plenty of game fish in Great Egg Harbor Inlet. George Gaul says that the surf fishing at Long Beach Island is the best in the country.

Howard Todt, who has been summering in Beach Haven, was cruising around the lower part of Little Egg Inlet on Sunday, September 15th, and hooked a beautiful striped bass at the mouth of Clark's Gut. Howard was using light tackle and the fish was a fighter, but after a twenty minute battle he succeeded in bringing it to the boat where it was brought aboard with the aid of a landing net. The fish weighed a little shy of seven pounds. After landing the fish he cruised around Wreck Thoroughfare where he found plenty of croakers and fair sized weakfish.

Stopping at a small island which lay between the Ocean and the Bay he noticed a number of small fishing shacks, so he took a walk around to find out just where he was, and the first person he ran into was Bill Ellis, President of the Dover Fishing Club, who was spending part of his vacation enjoying the surf fishing at Little Beach. Bill had been trying for a striper all summer and Howard came up there and caught one right under his nose.

Casting lessons for the juvenile class were discontinued after the first week in September due to the shorter days and the lack of sufficient light in the early evenings making it impossible to give the boys the proper instructions. The summer season was a decided success and a number of the youngsters who never handled a rod and reel before are now casting 150 feet and over. Classes will be continued in the spring of 1941. Talk this up to your boy this winter and see that he comes out next year. If you haven't got a boy, try it on the girl or get a boy in the neighborhood interested.



Byard F. Brogan of Philadelphia, a member of the Pennsylvania State Fish and Game Protective Association, displaying the seven-pound largemouth bass which succumbed to his angling skill during the past summer.

Information regarding the Dover Fishing Club of Philadelphia or any of its activities can be obtained by addressing the secretary, Mr. Robert Morris, 2728 West Montgomery Ave., Philadelphia, Pa.

Gloucester County Game and Fish Association

The Gloucester County Game and Fish Association will hold its next meeting on Monday evening, October 28th, in the Franklin House, Glassboro, New Jersey. It is anticipated that a moving picture will be on hand with which to entertain the club members following the business meeting.

Holmesburg Fish and Game Protective Association

The Holmesburg Fish and Game Protective Association will resume Fall and Winter meetings in the Holme Library, Frankford Avenue and Hartel Streets, on Monday evening, October 14th. Arrangements have been made for interesting "movies" accompanied by a speaker. The Entertainment Committee invites all sportsmen interested in hunting, fishing and conservation to come to this meeting—or to any of its regular meetings which are held on the second Monday of each month.

Anyone who desires information concerning membership in this Association may contact Russell Cornelius, Secretary, 4608 Maple St., Philadelphia.

Lansdale Sportsmen's Club

Richard W. Tomlinson, Secretary of the Lansdale Sportsmen's Club, announces that the next meeting of this Club will be held on Tuesday evening, October 22d, at Second and Walnut Streets in Lansdale.

Also, on October 21st, the Lansdale Sportsmen's Club will be the host when delegates from the fourteen member clubs of the MONTGOMERY COUNTY FEDERATION OF SPORTSMEN'S CLUBS will hold their third quarterly meeting of the current year in the Lansdale Firehouse.

Lower Merion Rod and Gun Club

Members of the Lower Merion Rod and Gun Club from the various sections of the Main Line enjoyed another fishing trip recently, when Captain Thomas, in the "Eastern Star," conducted them along the Bay out of Bowers Beach, Delaware. Although the day was generally conceded by the hundreds of fishermen in the Bay to have been a poor fishing day, since "the big ones were not biting," the Lower Merion group hauled in a total of thirty-seven "weakies" and croakers.

Howell Dietrich, of Upper Darby, won the prize for catching the first fish on the trip—a croaker; while P. Fennimore, of Narberth, was just a few minutes behind with another croaker. Howell Dietrich also won the prize for catching the largest fish of the trip, a weakfish; while Ernest Boulay, of Narberth, was a close second with a croaker.

As they assembled at the Narberth station at five o'clock last Sunday morning—before they were quite fully awake, no doubt, the boys performed a few capers which were stranger than fiction. Among them, Ernest Jenkins, of Narberth, left home without his shoes; George Purring, also of Narberth, the President of the Lower Merion Rod and Gun Club, arrived inadvertently clad in his wife's beach pajamas; one member of the party discovered he had brought the family garbage bucket instead of his fish can; and Walt Johnston, of Roxborough, having neglected to set his alarm clock, was fortunate enough to arrive—without his breakfast, with one eye still only half open and minus certain necessary articles of clothing, just as the group was about to leave the Narberth station.

Finally, all was under control and the party proceeded toward Delaware, where the remainder of the day was not without its laughs at almost every turn.

As the group reached its destination, Lester Peters and Nich Finoia, both of Narberth, simply could not agree on just what time of day it was. After much serious discussion in which other sleepy-eyed members of the group participated, however, it was discovered that Nick's watch was set according to good old Daylight Saving Time; whereas, Lester had decided that, since he was going to Delaware, he should be guided by Delaware's time, and his watch, therefore, was set according to Standard Time.

About noon, several of the boys—especially Earl Moore, of Penn Valley, and Elmer Jenkins, of Narberth—were downright disgusted because, for more than an hour, those objectionable "oyster crackers" had been stealing their bait so fast that they had lost almost all hope of being able to hook into anything else. Just at this point, George Purring was seen tugging at his line as though there were nothing lighter than a whale on the other end of it. When the "whale" was finally hauled into the boat, it proved to be a large cluster of *oysters;* whereupon, everyone took time out to enjoy an oyster cocktail, with tomato juice which the leader of the party, Charles Young of Narberth, had thoughtfully placed in his lunch basket upon leaving home.

Among the members of the Lower Merion Rod and Gun Club who assembled recently for a day of fishing.

Incidentally, Charlie did not find it necessary to administer his remedies for seasickness; the Bay was comparatively calm and his crew was composed of good sailors. In fact, they were up to all of the tricks of good sailors, as well; for, while the trip was being brought to a close, someone directed the attention of the others to the starboard side of the boat. There they beheld two of their worthy mates, laughingly *stuffing* large pieces of lead into an innocent croaker, in order that said croaker would outweigh Dietrich's or Boulay's!

A past and present president as they attended a recent Montgomery outing. Left: John A. Miller of Narberth, former president of the Montgomery County Federation of Sportsmen's Clubs, as well as one of the organizers and the first president of the Lower Merion Rod and Gun Club. Right: William Stoneback of Colmar, present president of the Montgomery Federation and president of the Lansdale Sportsmens Club.

Monocacy Field and Stream Association

Actual fishing, as well as improvement of streams to better future fishing, have been consuming the time and efforts of the many members of this active Association, which held its second Fall meeting on the 7th of October in its Club Room at Mauch Chunk Road and Elizabeth Avenue, Bethlehem.

Montgomery County Fish, Game and Forestry Association

Martin Horn, of Black Run, and George Sinclair, of Norristown, with the aid of various other members of this Association, added another figure to their score for successful outings of this club, when they staged the Fall Outing on Saturday, September 14th.

Men and women from Norristown, Roxborough and adjoining communities assembled on the grounds of the Eastern Penitentiary at Graterford for this occasion on which a delicious clam bake was served. Trap shooting, quoits and a dog show provided a complete afternoon's enjoyment.

Warren Ziegler and Clayton Alderfer, both of Norristown won the quoit-pitching contest.

In the Dog Show, there were six winners. Hansell French's beagles won first place in both the male and female classes. A springer spaniel owned by Warren Ziegler of Norristown, won first place in its class. In the English setter group, Lem Kohl of Norristown, took first place with his dog; while Sam Cope, also of Norristown, took second place in this group; and Harper Bean, of Eagleville, placed third with his setter.

Harper Bean's Chesapeake Bay retriever walked away with the honors for the "best dog, irrespective of class, at the Show."

Pennsylvania State Fish and Game Protective Association

Edgar W. Nicholson, of Ardmore, President of this club, as well as a member of the Pennsylvania Fish Commission, deserves congratulations for the success of the 1940 "Bass Out-

(Turn to Next Page)

ing" held by the Pennsylvania State Fish and Game Protective Association on September 18th (not on September 11th, as previously announced herein).

(Throughout the year, meetings or outings of this Association are scheduled for the second Wednesday of each month, with the exception of the "Bass Outing," which since about ten years ago, has been held on the third, instead of the second Wednesday of September. This deviation was decided upon because of the shortness of the interval between "Labor Day" and the second Wednesday of September, Mr. Nicholson explained).

Annually, as the summer months are brought to a close, the hundreds of sportsmen affiliated with this Association eagerly look forward to this occasion. As has been the custom over a period of years, the "Bass Outing" replaced the regular September meeting and lasted throughout the entire day, during which time lunch was served and various games and contests were conducted in the vicinity of the Chain Bridge on the Neshaminy Creek just off the Second Street Pike.

Perkiomen Valley Sportsmen's Association

Members of this Association have reported catches of large bass, caught at various points along the Upper Perkiomen. Among those who have been fortunate enough to have "brought home big ones" so far this year, is Howard Baldwin, whose latest catch was a twenty-inch largemouth. (And this story is not just another "fish tale"; for it was corroborated by two members of the Perkiomen Valley Sportsmen's Association: i.e., Frank Clamer of Collegeville and Howard Shallcross of Graterford, President of the Club and former President of the Montgomery County Federation of Sportsmen's Clubs.)

We have learned that Howard Shallcross, too, is an ardent Waltonian, who is frequently seen "out fishin'."

This Association will hold its next meeting on the evening of Thursday, October 10th, in the Borough Hall at Schwenksville.

Royersford Hunting and Fishing Association

This Association, together with the Spring City Fish and Game Association, is rebuilding the dam breast and raising the water level about two feet at the old mill pond between the Schuylkill Canal and the Schuylkill River above the Spring City railroad station. Fine Oswego bass have been taken from this dam during the past weeks.

Last year the largest Oswego bass to be reported taken from the dam was captured by Merle Hildebeidle, of Spring City, says Irwin Clemens, of Royersford, President of this club and former President of the MONTGOMERY COUNTY FEDERATION OF SPORTSMEN'S CLUB. Merle's bass weighed seven and one-half pounds.

Upper Providence Fish, Game and Forestry Association

On the second Saturday of each month, this Association holds trap shooting at the Club House grounds, located on the Beynon Farm, Oaks, Pa. Prizes are awarded, generally on the "Lewis-Class" system, each week to the winners of the weekly shoots. During the past few months, trap shooters of this Association have been competing for a club trophy to be awarded to the individual who makes the highest score.

We are told that members of the Upper Providence Fish, Game and Forestry Association are planning crow shoots to take place early in the Fall.

Fish Warden Harry Z. Cole displays a net full of this year's hatch of catfish, sunfish, millroach and tadpoles which were recently transferred from the Beidler ponds to the Skippack and the Perkiomen.

Wissahickon Field and Stream Association

Members of this Association recently helped Harry Cole of Norristown, Fish Protector of Montgomery and Bucks Counties, to drain the reservoir behind the K. and M. Company in Ambler. From this reservoir, approximately 1500 fish were taken, including about 150 bass and 400 sunfish. The remainder of the fish removed were suckers, catfish, carp and millroach. Most of the fish were placed in the Lock Ausch Reservoir outside of Ambler.

George Deems, of Ambler, President of the Wissahickon Field and Stream Association, tells us that, among the fish above-mentioned, there were bass which any angler would be proud to hook; and members of this Club have reported catches of unusually large largemouth bass from the Lock Ausch Reservoir this summer.

FROM THE UNITED STATES FISH AND WILDLIFE SERVICE

Fishes suffer little if any pain when they are hooked, for there are very few nerves about the jaw which could cause that sensation.

Some trout have been known to be hooked two or three times in the same day, the fishermen using the same type of bait. Fish, no doubt, have a sensation of discomfort, but not as great as that of the higher animals.

History records that the redoubtable Capt. John Smith, away back in 1608, captured a sting ray in Chesapeake Bay by stabbing it with his sword. However, the ray also used its "sword"—its sharp, barbed spine attached to its tail—with which it inflicted a wound

Left: Charles Young of Narberth helps Fish Warden Harry Z. Cole to carry some of the 16,000 fingerlings raised this year in the Beidler ponds.

in Captain Smith's wrist an inch and a half deep. The pain and discomfort that followed was so intense that the sturdy captain despaired of life and ordered his grave prepared. However, due to the remedial effects of a "precious ayle," the grave was not used, and Captain Smith lived to eat his antagonist and found him very good eating.

The farthest recorded distance ever traveled by any starfish was approximately 5,000 feet, or less than 1 nautical mile, and this took 10 months' time.

GIGGERS FINED

Five men pleaded guilty before Justice of the Peace Ralph H. Galbraith, of Huntingdon, to charges of using illegal devices to catch fish, and were sentenced to pay fines of $20 each and costs.

The men, all residing in the vicinity of Petersburg, were: Chester Keller, William Keller, William M. Henry, S. J. Wilson and William Thomas Wilson.

The charges were filed by Lincoln Lender, district fish warden of Bellwood. The quintet was apprehended by Thomas Bell, district game warden of Huntingdon, on the night of August 10th while gigging for fish in Stone Creek, near McAlevys Fort. The lights, gigs and other paraphernalia in their possession at the time were confiscated. A number of fish and eels were also seized.

NETTER DRAWS HEAVY FINE

Charged with operating a gill net in Sylvan Lake, John Gorka of 153 West Main Street, Glen Lyon, at a hearing before Justice of the Peace Miner Aylesworth of Sweet Valley was

found guilty and was sentenced to pay a fine of $200, plus costs and to serve 30 days in jail.

Gorka was arrested by Fish Warden Russell Womelsdorf, Special Fish Warden John Lukavitch and Deputy Game Protector Ray Harned following a tip by Anthony Lozinski of 311 Gardner Street, Plymouth, who discovered the net while casting for bass. Lozinski testified against Gorka at the hearing.

Womelsdorf said the gill net was 65 feet long and contained 20 bass when it was taken from the water by the three investigators following Gorka's arrest. The fish were returned to the lake. Gorka was held at Luzerne County Prison until the hearing.

Womelsdorf spoke highly of Lozinski's action in reporting the discovery of the net. "Illegal taking of fish by nets, dynamite and other methods certainly does not improve fishing for sportsmen who obey the law," he said. "I or any of my men will welcome and act promptly on reports of such violations."

Arrests have been numerous, he said. There also have been complaints about violations of the laws governing operation of motor boats and several arrests have been made, he said. "I earnestly urge all fishermen and motorboat operators to observe the law," Womelsdorf said. "Persons found breaking the law will be arrested and will have to stand hearing as soon as possible following the arrest. No mercy is being shown to violators."

TIOGA SPORTSMEN SEEK CLUB SITE

Tioga County Consolidated Sportsmen's Association officials, meeting at the Borough Building, discussed the possibilities of a centrally located Club and grounds for organization activities, and decided to lease or purchase some site, centrally located in the county for the annual outing, for picnics, sporting events, and other affairs.

Traps and other equipment would be installed on the grounds, and any sportsmen's organization in the county would be privileged to use the facilities. If it was financially possible a club house would be erected, or if there were a house on the leased site, that would be used for all Association functions.

Appointed as a committee to survey possible locations were Joe Borden, Charles Loomis, and Louis W. Stevenson.

The directors also discussed the possibility of the Association providing a central place for all breeding pens, rather than have each individual club maintain its own, and then have each club aid in supporting and maintaining the one main breeding station.

ANNOUNCE WINNERS AT TIOGA FIELD DAY

Expressing the thanks of the sportsmen of Tioga county "for your generous contributions to the Tioga County Sportsmen's Field Day at Bradley Wales Park," Leslie H. Wood, Tioga County Game Protector and chairman of the Prize Committee, released a list of prizes, donors and winners as they were given out at the picnic. Given first is the standing prize, the name of the donor, and last the name of the winner:

Trap Shooting Class A—$5.00 in merchandise, C. P. Wingate, G. Cross; leather bill fold, Ralph E. Dewey, Ballard; quart thermos bottle, Moshier's 5 & 10, M. Grasso; $1.00 cash, Williams' Dairy, M. Northrup; cigar lighter, C. P. Wingate, D. Northrup.

Trap Shooting Class B—English Setter, Academy Hills Kennels, Ivan Neal; thermos jug, Focht's Cut-Rate Store, Al Budd; leather bill fold, Markson's Mansfield, H. Bowen; $1.00 cash, Gillette Service Station, Neil Niles; cigar lighter, C. P. Wingate, J. Hulslander.

.22 Caliber Trap—$5.00 in merchandise, C. P. Wingate, Ballard; electric corn popper, Wellsboro Electric Co., Cooney; Brownie camera, Bower's Drug Store, Stevenson; $1.00 cash, C. P. Wingate, E. Starver; oil change, grease job, Hawk's Garage, W. Henry.

Running Deer Target—$5.00 in merchandise, C. P. Wingate, C. Cross; table lamp, Lush Bros., E. Starver; shooting mittens, Parker Bros., J. Ross; folding hunting knife, Mitchell & Briggs, F. Davis; grease job, Callahan's Garage, K. Monks.

Ground Hog Target—carton .22 shells, Louden's Service Station, Don Northrup; hunting knife, P. H. Miller, Charles Cross; cigar lighter, C. P. Wingate, H. Henry; seven grease jobs, Howard H. Campbell, George Cross; wool socks, Joseph Merz, Drexel Close.

.22 Rifle Target—$5.00 in merchandise, (Anonymous), Howard Brewster; cake plate, J. J. Davis, G. W. Cross; cigar lighter, C. P. Wingate, Charles Sheffler; pocket knife, Russell Rowe, B. Fuller; wool socks, Joseph Merz, John Butler.

Fly Casting Accuracy—Leatherbound fish basket, Frank Dunham, James Smith; canvas creel, Frank Dunham, George Cross; fish rod, B. L. Davis, L. H. Wood; hunting knife, Harry Atherton, Charles Cross; flashlight, Leon Lewis, D. Close.

Fly Casting Distance—Steel casting rod, Harry Taylor, James Smith; tackle box, Frank Dunham, Bill Crumpton; reel case, Red Head Brands, George Cross; hunting knife, Louis Rabioli, Louis Stevenson; flashlight, Dean Phipps, L. H. Wood.

Quoits—Floor lamp, Newberry Co., Russell McConnel; five gallons oil, Bates & Allen, Eldon Roberts; chrome kettle, People's Market, Donald McConnell; subscription to *Agitator*, Paul Davies; subscription to *Gazette*, Kenneth Staley.

Wildcat Trap—Electric toaster, Harris Store, C. W. Brion; cigarette lighter, C. P. Wingate, Ballard; box cigars, Simons' Restaurant, Mallory; flashlight, Safford Hotel, Campbell; box candy, Wellsboro Candy Kitchen, P. Nelson.

About 200 gate prizes were also awarded at the celebration, with names of the winners being announced over the loud speaker.

STAG OUTING IN ALLEGHENY

Allegheny valley sportsmen, more than 500 of them converged on the woodland farm of the Tarentum Sportsmen's Club, Harrison Township, for the annual stag outing.

Guests were present from all over Western Pennsylvania.

Skeet shooting and horseshoe pitching were the chief diversions of the day.

The outing brought together some excellent local skeet shooters and champion and near champion horseshoe pitchers.

More than 300 pounds of roast beef was the basic food served. The beef arrived from the Armour Packing Company plant, Chicago, in a large waterless cooker. The meat cooked as it sped over the rails in a baggage car from Chicago and was "just right" when opened during the afternoon.

Jesse Humes, of Natrona Heights, who is serving his third term as president of the organization, was there in a 10-gallon hat and supervised the day's activities.

Ideal weather conditions helped to bring out the crowd and officers said the outing was a real success.

CATCHES COSTLY FOR SPORT FISHERMEN

The housewife who pays 15 or 20 cents a pound for fish in the neighborhood market gets the break every time over the sports fisherman who fishes for the fun of it and pays, for every piscatorial item he brags about, an average of from 3 to 5 dollars a pound.

Unofficial estimates in sports-fishing circles hold that 13,000,000 sports fishermen spend more than $1,000,000,000 a year for the privilege of getting out into the waters and "tryin' the ol' fam'ly luck." Fishing licenses, these sources estimate, cost them more than $10,000,000; tackle equipment, $35,000,000; transportation, hotel quarters, food, gasoline for automobiles and launches, hats, coats, shirts, jackets, trousers, boots, overcoats, tents, cots, blankets, and miscellaneous odds and ends total more than $955,000,000.

Sports fishermen sell no fish, so they derive no profit from their efforts, and they outnumber the men engaged in commercial fishing, 80 to 1.

Recreational fishing as a sports industry is said to top all sports, including golf, baseball, tennis, football, skiing, polo, basketball, hockey, ice skating, hunting, swimming, and roller skating.

It is a fact that a fish may be drowned in water under certain conditions. This will happen when a fish is placed in water devoid of oxygen, or when certain swift-moving fish, such as the mackerel, are restricted so that they cannot swim rapidly. It appears that the current of water produced solely by the opening and closing of the gill covers does not supply sufficient oxygen to maintain life in these fish, even though the water is saturated with oxygen.

BOARD OF FISH COMMISSIONERS
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HERE AND THERE IN ANGLERDOM

One of the nicest brown trout caught in northwestern Pennsylvania was taken in Sugar Run in July by C. B. Steele, Meadville, RD. Caught on a fly, the brownie measured 23 inches in length and tipped the scales at 3 pounds 12 ounces.

Noted for its smallmouth bass fishing, the Conodoguinet Creek in Cumberland county this year produced some surprise catches of big trout, according to Warden Frank Sanda of Steelton. Fishing live bait, Frank Morrett of Harrisburg took a rainbow in the Conodoguinet that measured 22½ inches, and two brown trout, 20 inches and 17½ inches in length respectively. Seven rainbow trout taken in the same stream by Harry Tolumius, Harrisburg, on fly, ranged in length from 12 to 16 inches. Shaffers Run in Perry county yielded a fine catch of brook trout last season to R. W. Rea of Harrisburg, top fish measuring 14 inches in length, another 12 inches and the remainder of the catch averaging 11 inches. Sanda also reports one of the nicest catches of catfish on minnows recorded on the Susquehanna River this year. The fish taken on minnows by J. W. Boyer of Royalton at Stein's Landing were from 14 to 17 inches in length and weighed from one to two pounds. Nine catfish comprised the catch.

A fishing contest being conducted by Edward Boyer of Weissport has been featured by some fine catches to date. Simon Britton of Palmerton topped the brown trout division with a 27 inch fish from Pohopoco Creek, Carbon county, Fred Blaney of Kittanning led the rainbow entries with a 25 inch fish and Otto Herman of East Mauch Chunk was at the head of the brook trout entries with a 14¾ inch brookie. Anglerette Gertrude Kreiser of East Weissport took a walleyed pike in Lake Wallenpaupack that bids fair to top not only the local contest but all state walleye catches this year. The pike was 32 inches in length and weighed 11 pounds 8 ounces.

Courtesy Allentown Call

This splendid 21-inch smallmouth bass weighing 5 pounds even was taken by Paul Korsak of Allentown in the Delaware River.

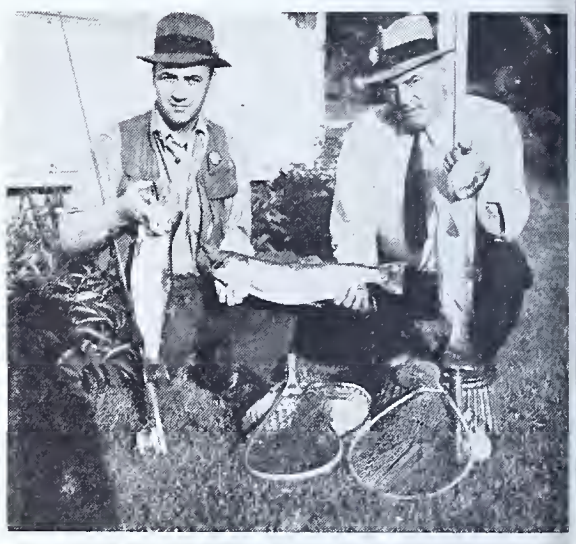
The action of the juices in a bass' stomach in dissolving a hook has been a subject of keen interest with bass fishermen generally. Commissioner Fred McKean adds definite information in the matter by the following note concerning the taking of a 14 inch smallmouth bass at Tionesta on the Allegheny River by Fred Frederick of New Kensington recently. Embedded in its stomach was a hook with eight inches of cheap line attached. One section of the hook was virtually dissolved.

A livewire program to improve trout stream conditions in their vicinity has been undertaken during the past six months by the Jenners Community Sportsman's Association of Jennerstown, according to J. J. Flanigan, secretary. Work has included construction of a trout holding pond one half acre in area and improvement of six miles of trout stream.

They're starting to locate the bass in Pymatuning, according to word received from Harris Breth, popular radio commentator and outdoors writer for the *Pittsburgh Sun Telegraph* and the *Philadelphia Inquirer*. Best smallmouth reported to date was taken by Miss Catherine Tyler of Avalon. It tipped the scales at 5 pounds 2 ounces.

Stream conditions in southeastern counties were anything but favorable for the bass fishermen early in the season, according to Warden Harry Cole of Norristown, who wrote: "This has been the slowest bass season for a long time. The season opened with roily and muddy streams. During the weekend following the opening, stream conditions were quite favorable and quite a number of fine bass were taken. From then until almost the middle of August, the streams were quite muddy most of the time."

Deservedly hailed as a dean of Pennsylvania trout fishermen is Dr. Edwin K. Morse of Pittsburgh. Writes Dr. Morse: "Immediately after each trout season ends, I go over my rods, reels, lines, flies, etc., and put everything carefully away for my first trip the next season (usually the last week of May). One of my "Brule" dry flies I use *warm* mornings, 72 degrees and over, before breakfast and until about 10 A.M., but this season I tied on green *eggs* in the bow of the hook and it was a *killer* for big trout. I usually have all the season's flies tied on to leaders, keep the day's leaders moist in a wet fly box so they can be quickly slipped on to the short dummy leader tied permanently to the line for the season."



Tom Forsythe, right, and Harry Kreps, of Harrisburg with three fine trout taken during the past season in Spring Creek. Two were rainbows, 21 and 22 inches in length and the largest, a brown trout, 23 inches in length.

Nev Sherlock, chief of dog law enforcement for the Department of Argiculture, has been taking many pickerel on central county streams with the light casting outfit. His catches have ranged in length to 21 inches and to date only several of the largest fish have been killed. Turning 'em back to grow bigger is one of his pet ideas.

Fly and spinner fishing yielded one of the largest smallmouth bass to be taken from the Conodoguinet Creek in Cumberland county in recent years. Measuring 22 inches in length and tipping the scales at 5 pounds 3 ounces, it was caught by C. J. Waggoner of Enola. Another hook with about 12 inches of line attached was found in its gullet.

Walleyed pike have teeth as sharp as those of a cat, but that fact didn't phase Lester Laudermilch, Middletown plugger, recently, according to Special Warden Maurice Kanneg of Harrisburg. He hooked a walleye, 20½ inches in length on plug, played it to a finish, inserted his forefinger and thumb in the walleye's mouth and landed it. On the same day, he took two smallmouth bass, 14½ and 16 inches in length on plug.

Natives Three

This splendid sketch of three native brook trout was prepared for the ANGLER by Albert G. Shimmel of West Decatur.

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NAME	ADDRESS	TELEPHONE
Ahrens, Julius	Star Route No. 3, Oil City, Pa.	
Aley, Kenneth P.	173 W. Main St., Galeton, Potter Co., Pa.	159
Bachman, Floyd	49 Broad St., Stroudsburg, Pa.	449
Bailey, Ross C.	230 W. Main St., Youngsville, Warren Co., Pa.	2-2181
Banning, J. H.	Connellsville, Fayette County, Pa.	946
Bidelspacher, C. A.	401 W. Central Ave., S. Williamsport, Lycoming Co.	2-4561
Briggs, W. E.	Waterford, Erie County, Pa.	76
Brink, Frank	Milford, Pike County, Pa.	108
Carl, Harry R.	RFD No. 1, Elysburg, Northumberland Co., Pa.	Numidia 13-R-3
Chrisman, R. J.	Kushequa, McKean County, Pa.	Mt. Jewett 4648
Cole, Harry Z.	877 Cherry St., Norristown, Montgomery Co., Pa.	2335
Cloos, Leland E.	Middlebury Center, Tioga County, Pa.	Middlebury 25-R-11
Close, L. E.	RFD No. 2, Emporium, Pa.	5156
Cross, George W.	Hammersley Fork, Clinton County, Pa.	Renovo 915-R-14
Dahlgren, David	Philipsburg, Centre County, Pa.	160-J
David, Dean R.	922 W. Mahoning St., Punxsutawney, Jefferson Co.	540-J
Hahn, Edwin	142 Myrtle St., Erie, Erie County, Pa.	Erie Hatchery
Harter, Keith	Dalton, Pa.	100
Henderson, S. F.	RFD No. 7, Greensburg, Westmoreland Co., Pa.	2684
Iman, Clifton	Evans City, Butler County, Pa.	70-M
James, George H.	65 E. Louther St., Carlisle, Cumberland Co., Pa.	708
Johnson, J. A.	12 Hobson Place, Bradford, McKean Co., Pa.	4362
Kirchner, Frank	McConnellsburg, Fulton County, Pa.	40-R-3
Lech, Anthony	48 Front St., Cressona, Schuylkill Co., Pa.	Sch. Haven 566
Lender, Lincoln	900 E. 5th & Lock Sts., Bellwood, Blair Co., Pa.	2981
Long, C. V.	East Waterford, Juniata County, Pa.	Blain 55
Mellon, Joseph	5245 Pennway Ave., Philadelphia, Phila. Co., Pa.	Delaware 5113
Munson, Gerald	Box 325, Linesville, Crawford Co., Pa.	55
Noll, Leroy	Pleasant Mount, Wayne Co., Pa.	
Ogden, Lester C.	416 Nichols St., Clearfield, Pa.	11-R
Pyle, Horace A.	220 E. Main St., Coatesville, Chester Co., Pa.	392
Sanda, Frank I.	416 S. Second St., Steelton, Dauphin Co., Pa.	9-2557
Schadt, J. A., Jr.	Lake Ariel, Wayne County, Pa.	109
Shoemaker, M. E.	Laceyville, Wyoming County, Pa.	66
Snyder, A. S.	RFD No. 1, Mifflinburg, Union County, Pa.	6-220
Wensel, Charles	Clarion, Clarion County, Pa.	91-W
White, Clinton	445 W. Neshannock Ave., New Wilmington, Lawrence Co., Pa.	87-M
Womelsdorf, R. J.	241 Pierce St., Kingston, Luzerne Co., Pa.	7-5836
Wounderly, W. E.	615 Eisenbrown St., Reading, Berks Co., Pa.	2-7181
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PENNSYLVANIA ANGLER

NOVEMBER, 1940

EDITORIAL

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Training School

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THE Officers' Training School opened its Ninth year at the Spring Creek Project, Tuesday, September 10th, continuing up to and including Friday, September 13, 1940. Several distinguished visitors were present and members of the Board attended the meetings.

In addition to the regular course of training, Colonel Lynn G. Adams, Commander of Pennsylvania Motor Police, assigned Private H. W. Stansfield of the Hershey Training School, to instruct the men in Self Defense. This course was undoubtedly the best which the men have ever had, and will mean much to their work in the future.

During the years the school has been in operation, a tremendous improvement has been shown in the efficiency of all officers. The training has given both a physical and mental development which commands more wholesome respect for observance of the law in their respective communities, and above all, has taught them their serious responsibilities and obligations to the fishermen of the Commonwealth.

We believe the accompanying photographs will be of much interest to fishermen. All men are now in possession of uniforms, and in our opinion their appearance will equal that of any other conservation group in the country. It is our hope that you, as fishermen, will be proud they are representatives of your Commission.

C. A. French
Commissioner of Fisheries

WHY BOTHER!

By FRED EVERETT

Illustrations by the Author

TWENTY years is a long time. That is—if you are looking ahead. But twenty years just past is such a short time that I can remember clearly many incidents which, as they happened, seemed unimportant but which now stand out clearly as full of meaning and significance.

It was a little over twenty-one years ago that I was made a shavetail in the U. S. Air Service and told to go home, the war was over and I couldn't have any more free rides among the clouds. So back home I went to take up a normal life once more, including hunting and fishing. And to meet up for the first time with little tufts of feathers on a hook, to which was fastened a piece of gut with a loop on the end.

My brother Ray said they were flies and you could catch trout on them. I can still see how excited he was. So excited that he had bought a whole hatch of them. He had them in a leather book that was made up of layers of white felt and coiled springs and pockets. The book was full of flies in all sizes and colors. I'd never seen anything like it before.

Of course I had heard rumors of catching fish on flies but since the fifth column in those days was not yet organized, the rumors left me unimpressed. There was only one fly that I had any knowledge of or faith in and that was red and white feathers on a 3-gang hook, part of a spinner thing which one pulled along behind a boat. When it got stuck you hollered to your big brother, who would stop rowing. Then all of a sudden the log it had caught on would move, you would tell brother and he would go crazy, grab the line out of your hand, yank and pull, nearly upset the boat, yell at you to get out of the way and shut up—then, after an awful long time and a terrible struggle, lift into the boat the biggest pickerel that had ever been caught or could ever be caught. Then he would slap the fish into the water under seat, slam down the cover and sit on it, wipe his brow, grab the oars and row with all his might for shore. And talk about it for years.

I knew that, because that was what happened to me up on Echo Lake in New York State when I was about eight years old and my big brother Bill let me hold the line while he rowed the boat. So, if that red and white thing on the spinner was a fly, then I was all for flies. I hadn't realized that that was what they were called.

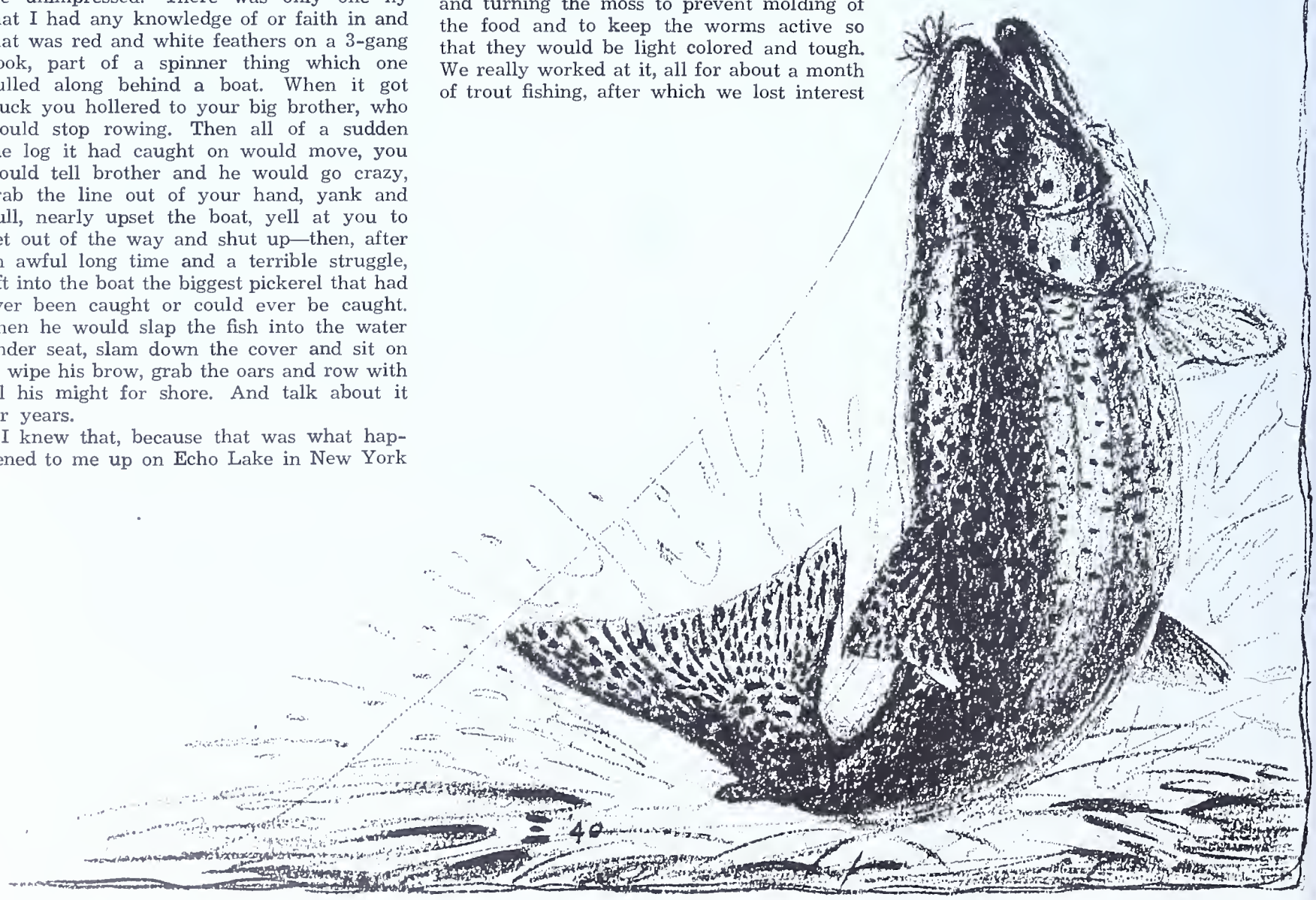
But these flies were different and I can't recall any particular excitement about them. Ray insisted we give them a try, so out we went.

Now Ray and I thought we were pretty hot as trout fishermen. We could go on streams where most others couldn't do a thing and come back with a good creel full. You see, we knew how to crawl on our bellies up to the edge of the pool, keep our heads down and dunk a worm where it would do the most good. And anything from 5⅞ inches up went into our creels. We also knew how to stretch the fish that extra 1/8 inch.

And we knew how to prepare our worms for best results. A couple of weeks before the season we gathered moss, cleaned it and packed it in a small keg, with plenty of food made of coffee grounds, corn meal and milk mixed to a paste and scattered through the moss. Into this we put our worms, watching them carefully to remove all dying ones and turning the moss to prevent molding of the food and to keep the worms active so that they would be light colored and tough. We really worked at it, all for about a month of trout fishing, after which we lost interest because then worms weren't any good as bait unless we could hit the stream at the end of a storm.

I was young and full of pep and nothing was too much bother if it meant fishing. I had faith in the worms but none in those tiny flies, so I confess I gave them a very unfair trial. I didn't know what a leader and enamel or fly-casting line were, so I tied the fly gut onto my braided silk bait line and heaved it out as best I could with my telescopic steel pole. Then I let it float downstream and pulled it back up, just as I would do with worms.

That wasn't so bad because it was a wet fly and that is one way to fish them. Then a miracle happened—something hit that fly and I yanked in a fish. But not a trout, only a red-finned dace. I was so mad I threw the fish out on the bank and tried again. Another dace! That was enough for me. Off came the fly, on went my worms and that was that. Me and flies were out! All caught up and finished. Give me the good old worm and I'd show you trout. That was the guy twenty years ago who for the last ten years



"My largest was a 17½ inch, 2½ pound rainbow."

has been writing and talking conservation and fly-fishing.

What caused me to change? I have wondered about that a great deal, figuring that since I am a normal average person, the answer might apply to the mass of our fishermen and be useful in furthering the cause of conservation. Now that I think I have the answer, I wonder if it will? If it does at all, it will be only as a by-product or after-effect and not the main result.

Fortunately, or otherwise, I have lived through the infancy of conservation and grown up with it. Not that it has reached maturity but it has grown. And with it have sprung up the so-called sportsmen's organizations and conservation clubs. From my connections with them locally and nationally, I have received certain impressions as to their value and purpose.

In terms of fishing, here is what I mean. I am frank to admit that I took up fly-fishing in the beginning for two reasons: one, I was convinced that I could catch more fish that way and two, I realized that it made it possible for me to have a longer trout season, that I could go on catching trout into June, July and August. I knew next to nothing about conservation or sportsmanship toward Wildlife and never gave it a serious thought. I was just another fisherman and a good example of what they are like. Therefore I am using myself as a guinea pig for this experiment.

What I did not take into consideration or even dream of was the effect fly-fishing was to have on my future life as a fisherman. It is on that effect or by-product that I pin my hopes for conservation if we can persuade the majority to take to the artificials.

Here indeed is a paradox. If the angler can take more fish over a longer period of time by using flies, wouldn't it be the opposite of conservation? It certainly would except for one thing—the change which takes place inside the fisherman himself. It is hard to explain but that change will take place in the same proportion as he becomes skilled in the use of flies.

There are many reasons for this, of which I think the following are the most important. First of all, he does catch more fish over a longer period of time. That satisfies his yearning to have at least one good day's fishing before he dies. Very often he catches far more than the limit and must liberate some of them. That is the turning point. Liberating a fish is like petting a little fawn or feeding baby grouse or quail—it makes you familiar with them alive and gives you a feeling far different than any dead fish could produce. You have examined the fish, talked to it and realized that it will be there for another day. You get a kick out of seeing it swim away—far more than taking it home for a neighbor or a cat to eat after you have shown off how big a catch you could make.

In time that feeling grows on you until you come to think of the fish, not so much as weight in the creel as a future test of your skill. Your interest now is in your tackle, your flies and methods of using them. Your pride is in your skill and not in the fish. The trout is only a means to your goal and therefore necessarily more important to you in the water than in the creel. In other words, you have become a sportsman and conservationist without ever realizing it or for that matter, caring a hoot.

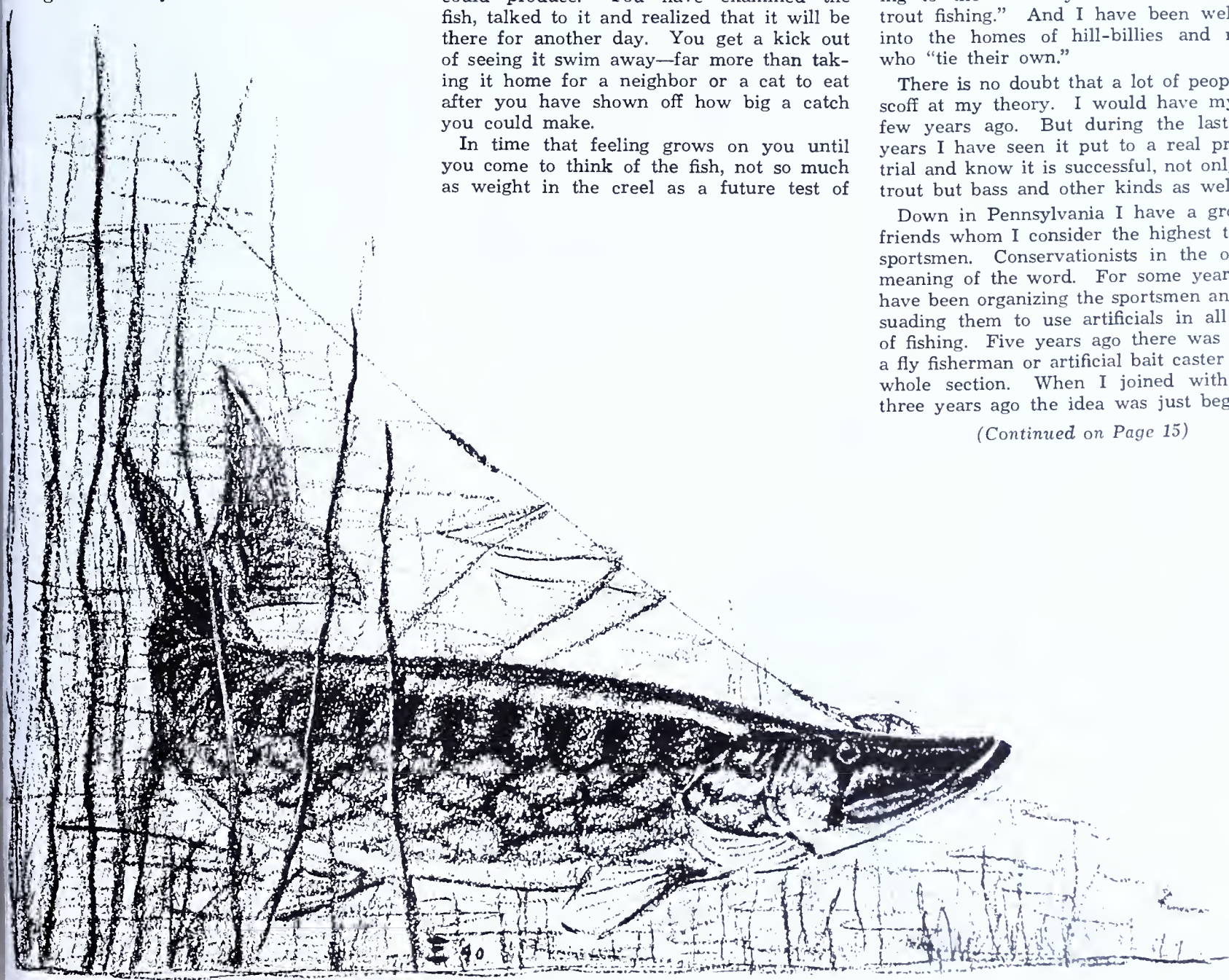
That's the way it was with me. Some years ago my sidekick Doc. Gardenier and I set a self-limit of trout at 5 each—one for each member of our families—except on special occasions. These were to be between 8 and 12 inches (the best eating size) all above 12 inches being too fine a fighting fish to spoil by keeping it, those under 8 inches being too small to keep. It is my belief that if all fly fishermen would adopt a similar limit to fit their needs, we would soon have much better fishing in our streams.

Another reason is the fact that, as a group, the fly fishermen were real sportsmen and one is constantly contacting the better type when meeting up with them. The feeling of comradeship is stronger, eliminating class and distinction. I have often had doors to higher sanctorums opened to me and broken up some of those mysterious "conferences" of the big moguls of Wall Street by whispering to the secretary—"Tell him it's about trout fishing." And I have been welcomed into the homes of hill-billies and natives who "tie their own."

There is no doubt that a lot of people will scoff at my theory. I would have myself a few years ago. But during the last three years I have seen it put to a real practical trial and know it is successful, not only with trout but bass and other kinds as well.

Down in Pennsylvania I have a group of friends whom I consider the highest type of sportsmen. Conservationists in the original meaning of the word. For some years they have been organizing the sportsmen and persuading them to use artificials in all kinds of fishing. Five years ago there was hardly a fly fisherman or artificial bait caster in the whole section. When I joined with them three years ago the idea was just beginning

(Continued on Page 15)



"The log it had caught on would move, you would tell Brother and he would go crazy."

SOME SORROWS OF THE ANGLER

By W. R. WALTON

Bureau of Entomology and Plant Quarantine, United States Department of Agriculture

The fisherman went forth to fish equipped with baits galore,
The bites he got were on his face which made him rip and roar;
"This license states that I may fish these waters, now and here,
But black flies and mosquitoes cannot read, 'tis very clear!"

"'TIS true, 'tis true 'tis pity; and pity 'tis 'tis true," that numerous bites at the wrong end of the line have ruined much otherwise successful fishing. In point of fact, it is pretty safe to assert that the malevolent voracity of mosquitoes, black flies, and punkies has caused the fisherman more immediate physical anguish than any other phenomena in his cosmos. I say "Immediate" in view of the painful memories of such devilish, somewhat tardy sequelae as chigger bites and ivy poisoning which, in lasting torture, surpassed even the souvenirs left by the aforesaid trio of felonious Diptera. These minions of Satan are all bad enough, but an even worse one has developed within recent years. In these days the American dog tick, which, from April to September, awaits the angler in the brush with out-stretched arms, has acquired the unpleasant habit of inoculating one with the spotted fever, a disease more painful and dangerous by far than that notorious gift of the mosquito—malaria. Fortunately the latter malady, at least in the Northern States, has gradually yielded to quinine administered in the light of modern therapeutics. But the dog tick, with his load of spotted fever virus, remains an ever-present menace which must be met with unfailing vigilance on the part of the angler, at least during the warmer months.

Mosquitoes come in several colors and sizes, from the little blackish fellow, the rock-pool mosquito, who is only 3½ millimeters long, and lives in puddles in the rocks, to the relatively huge, fringe-legged mosquito or gallinipper which is nearly ½ inch long, or actually big enough to be used as bait on a number 20 trout hook! Fortunately, it is relatively less numerous than its smaller brethren but frequently is encountered in the Pennsylvania mountain woods.

An obstreperous and mean little mosquito is one that breeds in water that stands in holes in hollow trees, known as the tree-hole mosquito and which, like the woodland-pool mosquito, is almost certain to be encountered by the angler since it lives near the trout and will bite in broad daylight a deal more easily and constantly than the fish.

Among the real curiosities of the mosquito world is a small black mosquito that survives under the burden of *Wyeomyia smithii* (Coq.), and whose larva or wriggler lives in the water contained in the tubular leaves of the swamp-dwelling pitcher plant. In winter, the wrigglers of this insect are frozen solidly in the water contained in these plants. But when brought indoors and thawed out they soon begin merrily to navigate. Strangely enough this mosquito does not bite either anglers or human beings, and practically all other insects that enter the pitcher plant's trap-like leaves become drowned in the water that invariably stands in them. These decaying insect remains are believed to afford nourishment to the plant.

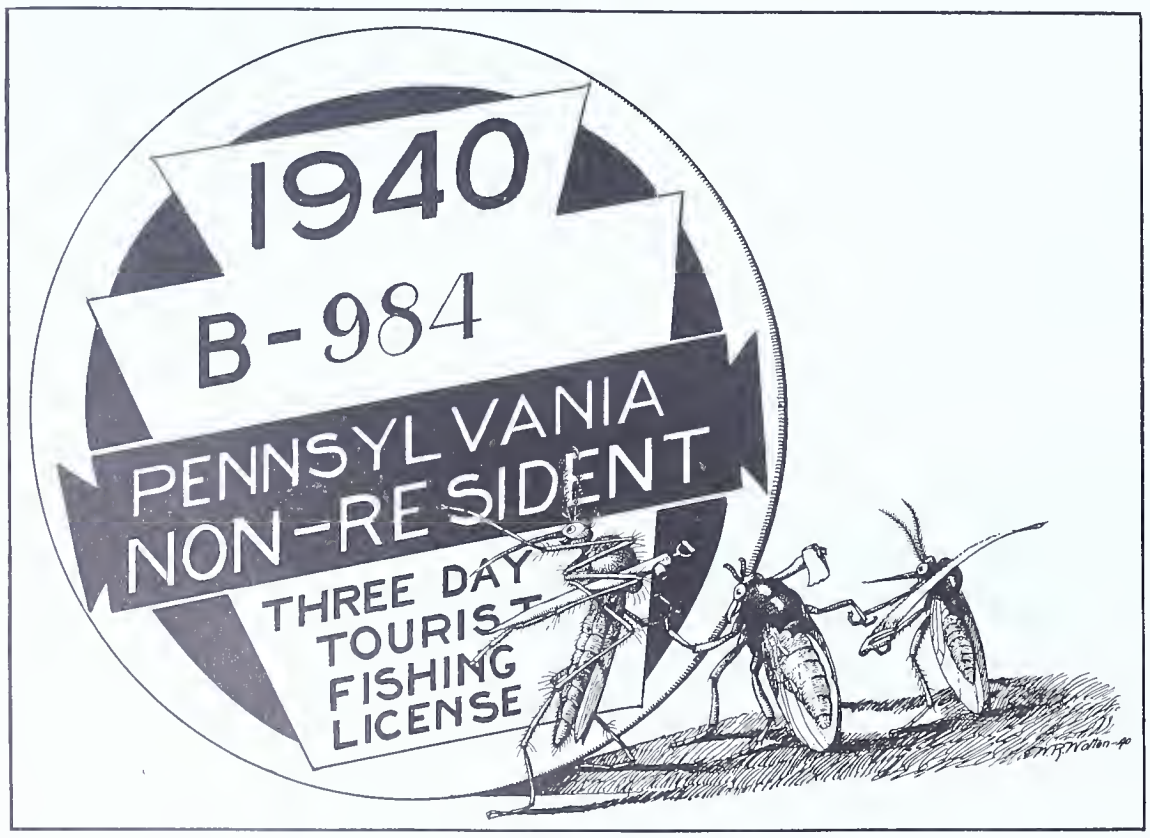
All informed persons at present know that mosquitoes are the sole carriers of the disease inappropriately called malaria. This word literally means the disease caused by bad air, and for centuries the foul, swamp air, or "miasma" was believed to be the direct cause of the various forms of ague. We know now that this is only one of the many kinds of disease that are distributed, both to man and beast, by the pesky mosquito which is vividly described by the English poet Samuel Rogers as follows:

"Now near and nearer rush thy whirring wings,
Thy dragon scales still wet with human gore.
Hark, thy shrill horn its fearful larum flings!
—I wake in horror, and dare sleep no more!"

And yet Rogers, in his early day (1785), knew not that these fearsome insects poison man with yellow fever, dengue fever, jungle fever, and elephantiastis, to say nothing of malaria.

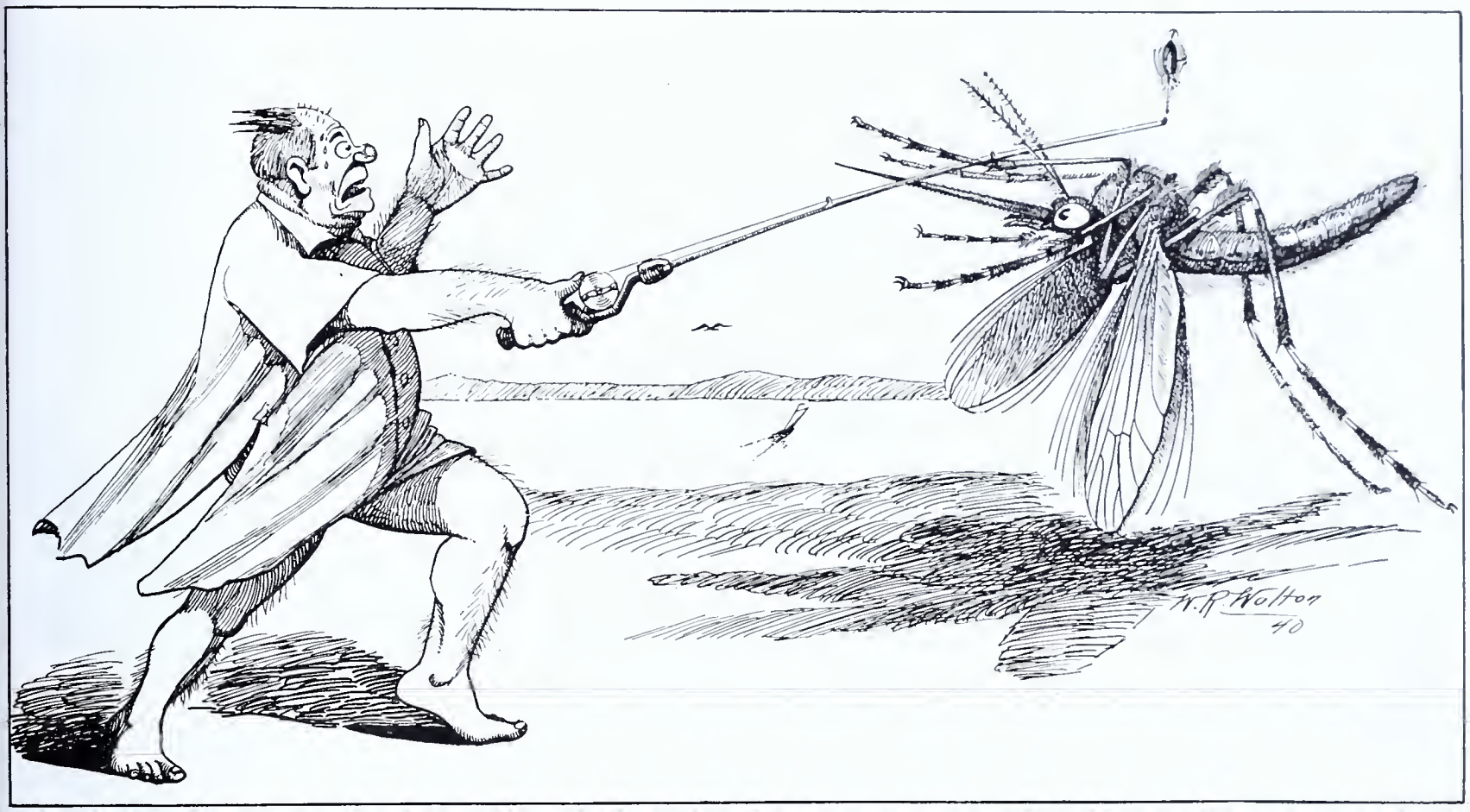
The most astonishing to me at least, of all phenomena relating to mosquitoes and disease is the strange part played by a tropical mosquito in the infection of man with a fly bot or grub which closely resembles that often seen in the skin of domestic cattle. The insect which produces this man-eating grub is a bright blue botfly *(Dermatobia hominis (L.))*, that may never even see or approach a human being! Nevertheless, it arranges in a most uncanny fashion to have a mosquito deliver its young at the desired destination. For many years it remained a deep mystery how these bots gained access to the human body, but finally it was observed that the parent botfly loitered about woodland pools until a flying mosquito appeared. The mosquito was immediately captured by the botfly, which then fastened a compact pocket of its own eggs underneath the belly of the mosquito! Mosquitoes thus laden were seen to alight on human beings, the bot eggs immediately hatched and the resulting grubs burrowed through the skin. Recently it has been observed that animals other than man are attacked by this grub, among them cattle, dogs, cats, mules, pigs, and the common Central American black howling monkey. Perhaps that is what makes them howl? At least it must be admitted that it could make them howl. Although the foregoing narrative explains the gruesome and mysterious method of infection by this grub, the unanswerable question still remains: How did this fly ever acquire the habit of persuading the mosquito to deliver her offspring to the right person at the opportune moment?—You tell 'em.

Luckily the angler in temperate climes is immune to attacks by bots and other more formidable gifts borne by mosquitoes, but these blood-thirsty insects can and do make life miserable at times in certain locations. Not that Pennsylvania is unduly mosquito-ridden, for such is decidedly not the case. That angler who is unacquainted with the



**The fisherman went forth to fish
Equipped with baits galore,
The bites he got were on his face
Which made him rip and roar:**

**"This license states that I may fish
These waters now and here,
But black flies and mosquitoes
Cannot read 'tis very clear!"**



countless hordes of mosquitoes that haunt great areas of the damp, sphagnum-moss carpeted woods of New England, northern New York, and Canada, "Ain't seen nothing yet," so far as mosquitoes are concerned. The same is true of the so-called arid plateaus of New Mexico and neighboring states, where in certain seasons, after torrential rains, the mosquitoes are so thick that in the bright sunlight the shady sides of cattle and horses become literally black with them. Furthermore, these mosquitoes can and do bite right through the seat of ordinary khaki trousers or at any other anatomical location where the cloth happens to be pulled tightly over the body. But at sunset the torture ceases for the chilly air puts a quietus on their pernicious activities.

In such circumstances some kind of protection is imperative if angling is to continue with any degree of satisfaction, and this may take the form of either nets or chemical repellents.

A well-designed head net which fits tightly around the hat brim and can be tucked into the neck band, gives fair protection to the upper works, but it must be supplemented with gloves thick enough to be impenetrable to the beaks of the insects. Such apparatus is likely to be rather clumsy and hot, but is a most welcome relief where the insects are numerous.

Anti-mosquito lotions or salves by the score have been recommended, but until comparatively recent years they have been smelly, greasy, and only partially effective. At present it is a pleasure to state that at least one formula has been found to give complete protection under the most severe of trials by scientific workers who are compelled to remain in the open, week after week, and to camp wherever night happens to catch them. I refer to John and Frank Craighead, Pennsylvanians who have for several summers been engaged, both by the United States Biological Survey and by the National Geographic Society, in securing illustrative material of American birds and mammals in many states of the Union. The lotion finally adopted by them as much the best of anything tried is composed of:

Diethylene glycol monobutyl ether acetate	65%
Diethylene glycol monoethyl ether	
Alcohol	28%
Corn oil	7%

If you can pronounce these chemical names distinctly, it will be incontrovertible evidence that you are reasonably sober no matter how much your breath may smell of Tom Collins. It is not smelly or irritating and gives excellent protection. An interesting discussion of this and other mosquito repellents occur in the June, 1940, issue of the *Journal of Economic Entomology,* page 566.* This lotion the Craigheads found to give protection not only from mosquitoes but from black flies and other biting insects.

Another formula used with some success is the following:

Camphor gum	3 parts
Salol	3 parts
Liquid petrolatum	4 parts
	(all by weight)

The oil is heated in a double boiler to 170°F., and the camphor and salol are then dissolved in it. This mixture is not only fairly repellent, but the salol is antiseptic and soothing so that it may be used to treat the bites as well.

A third formula is both a repellent and an insecticide and consists of:

Pyrethrum extract 30%	1 part
Castor oil	3 parts
	(by volume)

It proved superior to the preceding mixture as a repellent but was far less effective than the first formula mentioned.

A good repellent for ordinary use, against mosquitoes only, is composed of oil of citronella and olive oil in equal parts. It is inexpensive and easily mixed. The olive oil prevents too rapid evaporation of the citronella and keeps it from irritating tender skins.

To the anglers of New England and other more northern states the name "black flies" signifies torture. Not that these blood-thirsty insects are absent from the South, for terrible outbreaks of them have occurred in the lower Mississippi Valley as a result of floods in that river. However, in these latitudes farm animals and poultry rather than man have been the principal sufferers and they were killed in large numbers during such outbreaks.

In the northern woods among the worst of these bloodsuckers, from an angler's viewpoint, is a species known as the white-stockinged black fly. This species occurs in Pennsylvania but seems not to be particularly troublesome here. When black flies attack man in force, they are far more painful and dangerous than an equal number of mosquitoes. Their attacks are both fierce and stubbornly persistent, as they crawl into the hair, up the sleeves, and beneath the neck band, as well as under the hat brim, in their effort to gain access to the flesh of their victim. The mosquito is a lady as compared to the black fly, which is not content, like the former, to thrust in a slender beak and quietly extract a modicum of its victim's blood. The black fly insists on gouging out a hunk of flesh, causing the blood actually to flow from the wound, which becomes poisoned and painful for many days and even weeks thereafter. These pests also carry a protozoan blood disease of ducks which kills both wild and domestic birds. Fortunately they do not feed at night, but to offset this they remain active in cool atmosphere which would quickly give mosquitoes a severe attack of chillblains. In the North black flies are most abundant during June and July, but in especially accursed localities they may persist all summer. Generally speaking they are found principally in the vicinity of swiftly flowing streams, from which they originate, but they may be car-

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"Paid in Full"

by

E. Lloyd King

IT WAS a beautiful late October day in the gay nineties. The two sportsmen riding expensive bicycles down the dusty country lane eagerly revelled in the bright sunshine, the last lingering hum of the few remaining insects, the smoky dreamy haze over the drowsy landscape. There was the pungent odor of dying and rotting leaves, the tardy birds overhead were hurriedly winging south; vagrant breezes kicking up out of the southwest carried nary a hint of King Winter. All in all it was one of those afternoons that make men grateful only to be alive, inspire him with a calm peace toward all living things, a tantalizing Indian Summer gem standing as a last bulwark against the death dealing blasts of the frozen north.

The two cyclists were such as are not seen on the highway today. The wheels alone, fancy silver mounted works of art only then beginning to awaken to the rumbling threat of the gas buggy, might well have cost several hundred dollars each. The sportsmen themselves looked a strange pair; discerning eyes might have had difficulty determining whether these were hunters or fishermen. Long cane poles, a minnow bucket, a two handled seine were strapped to and occupied places of convenience on the pedallers' steeds. Boots there were too; however, each had a gun across his shoulder on a sling, both wore the shooting jacket common to those days. Fishermen or hunters, or both?

The pedallers were traversing an old rocky roadway along a sparkling creek winding about a sentinel tree clad hill just north of the Mason and Dixon Line in Southern Pennsylvania; alike they ignored a stately picturesque natural dam of virgin native stone, calmly riding past the ruins of an ancient stillhouse and its legend of buried treasure, up beyond the mill grinding out grist and on along the race to the man-made artificial dam.

In truth the two were on a journey of dual purpose; first and most important they planned to secure and cache a bucketful of minnows, then to retreat to the fastness of the hill to while away a few hours late afternoon and evening with the grey tails, not to mention the few Black Fox squirrels still lingering thereabouts. At dusk the duo intended to slip down to the rocky dam and spend the early evening hours angling for a gigantic old smallmouth bass known to haunt a protected outcropping.

Gliding up to the overhanging rocks where usually the bikes were safely parked, duffel stored and the like, immediately signs of a recent intruder became evident. A crude fireplace had been thrown together, a bed of leaves snuggled against one wall, several tin cans ostentatiously recently used as cooking utensils leaned neatly against a shelf-like ledge; about the smoldering coals and flat restraining stones lay remnants of some turnips and potatoes, likely snitched from a late garden nearby. On adjacent bushes hung the dripping remains of a recent wash, pathetically faded and torn jeans, a much abused and ragged shirt; not far away reposed a pair of brogans that might have been cast aside even by Washington's shoeless army at Valley Forge.

From behind some dense undergrowth and the environs of the nearby mill race came the sound of wild splashing; some thing or things were frolicing mightily therein. Cautiously parting the bushes a startling scene greeted our two friends. Violently jumping about in the knee deep water, apparently trying to catch something with bare hands, was a gaunt, lean, hungry looking and wholly naked 15 or 16 year old boy, so skinny that his ribs resembled nothing so much as the teeth of an old fashioned country hay rake. His hair was shaggy and long; legs and arms thin and bony. Beside him, equally excited and just as shaggy, was a dog of all too apparent doubtful ancestry and also desperately endeavoring to capture something in the water. Creeping closer our friends readily identified the quarry. Armed with only hand and fang, the two fisher folk had cornered three or four small suckers. Sensing the hunger of boy and dog, the newcomers unwound the minnow seine and swung into the fray. In a thrice several shiny suckers lay in the outstretched paw of the lad, whose eloquent eyes shone in mute gratitude while he vainly tried to blubber more articulate thanks.

With a deft twist of a rusty knife, the lad slit the suckers, spilled out the innards, cut away the gills leaving heads on the fish, hurriedly scraped away a few scales and ran to the fire. Still nude he carefully dropped the fish onto the hot flat stones, and crouched on his haunches, watching the cooking meat, one arm hugging and restraining the quivering canine. The fish were still only half cooked when the first came from the fire and was evenly divided half and half, one part for the human and one for the dog. The second fish followed in the wake of the first, and yet the third, share and share alike. It all touched the hearts of the strangers; such desperate hunger they had never witnessed in this fat section of Pennsylvania. Diving into jacket pockets, out came their lunch one sandwich each of fresh home made bread, laden with butter, coated with old fashioned brown sugar, another each of the same delectable bread and a half-inch thick layer of Pennsylvania Dutch pot cheese, yet a third pair boasting thick pungent slices of cold fried summer sausages, that kind typified in an art almost lost to the world today, cloth bags or hog bladders stuffed to bulging diameters with juicy pork, pepper and celery salt, then smoked slow and long over a green hickory wood fire. Topped off with several spicy sugar cookies, the cravings of the ravenous pair had been appeased, apparently at least.

Then the curious benefactors asked for the story. It seemed the boy and dog were on their own and had been for several years already. They were the late 19th Century

prototype of what the New Deal likes to call transients—in the old days less polite persons dubbed just such as tramps, or even bums. Winter time the pair spent in the south; summer they travelled north, run of the lot knights of the road let us say. This season they had remained north on a little job longer than usual, too long; then starting south a week ago with an older fellow, they awoke one morning with the companion gone, with him the lad's new shoes, his little supply of money, his one blanket. Handouts were meagre and grudging, the country folk wary; it was rather late in the season for the type, besides the youth of the lad proved a hindrance rather than an aid, the majority suspiciously refusing to believe he was that which he professed to be. Slipping through here the evening before at twilight and discovering the suckers swimming about in the race, they made camp. Turnips and potatoes prepared without salt, pepper or meat formed the evening meal; turnips and potatoes furnished breakfast. Until a half hour past, dinner had succeeded most successfully in eluding the wanderers.

Curiosity satisfied and vanity mellowed by the act of charity, our friends prepared to search for the precious bass bait, minnows. Now minnows were never plenty in the cold waters of the creek that a few miles above offered safe haven for brook trout. A likely contributing factor to the scarcity of bait fish were the many large smallmouth bass lurking in the rocky channels.

The little stranger proved an anxious and willing helper in the search, displaying an avid interest in the manipulation of the two handled seine. After possibly forty-five minutes effort, the trio succeeded in corraling an exceptional assortment of big four inch chubs. Refusing the lad permission to join the hunting foray and cautioning him not to fool around with the bucket of precious bait fish, the two sportsmen retired to the forest primeval for several hours with the shotgun prior to nightfall.

Meeting only with indifferent success the hunters returned at twilight and made their way to the rock cleft in quest of the little wanderer and the minnows. No sign of boy or dog. Thinking perhaps the lad had gone over to the creek and noticing a bright fire burning, our friends hurried in that direction. From the fireside came a good natured hail: "Who's there? That you, Bill?" Approaching the fire, the would-be fishermen discovered several natives doing a little nocturnal wood chopping, raiding a fallen bee tree under the haven of falling darkness. Still no sign of the boy. Asking if the lad had been sighted, the first speaker remarked: "You mean that crazy little tramp? Hell, the last we saw of him he was cooking minnows in a bait bucket. Said he and the dog were going to eat the damn things cold, heads and all. Packed those blamed sardines between layers of leaves in the bucket and headed down the road along about sundown. Had a darn nice bucket and seine; wasn't yours was it, Bill?"

So that was the payoff? The lad they befriended not only ate their lunch, but also the bait. And the little wanderer took the means of procuring more bait right along with him, even if it had been possible to obtain a fresh supply in the darkness, which it wasn't. No doubt the boy intended to do a little fishing on the way south, not with hook and line, nor even with bare hands, but with a more effective weapon, a minnow seine. And despite the borrowing act, despite the first wave of disappointed anger, passing time soothed the incident over with her magic wand of humorous understanding and appreciation of the inherent courtesy of the waif; he might have carried off an expensive bicycle too, but the wheels were not molested. Taking only that which might assist in sustaining the inner man, the lad probably needed the seine more than the rightful owners.

Neither expected to see the youth again, but the workings of fate are ever strange. Several years later, the younger of our two sportsmen, accoutered in the trappings of a United States soldier, lay in a steaming tropical jungle far away from his Pennsylvania home. All around him crouched other men attired either in the khaki of the volunteer or the blue of the regular; some of them quietly patiently enduring, others fumbling rifle locks or nervously polishing already gleaming bayonets. Up above on the hill, the ragged line could see little figures in white darting about; from thence came the spiteful crack of the Mauser, followed by the humming whine of bullets, accompanied every now and then by a dull sickening thud, signifying that another homesick Yankee boy had likely received a free ticket to fame's eternal camping ground, the bivouac of the dead.

The suspense was well nigh unendurable; too costly to remain inactive, no orders to advance. Men were being hit in ever increasing number; the wounded suffering in the intense humidity and heat piteously called for water; some, the more crazed by thirst and pain, begged horror stricken comrades to end the misery. Deadly scorpions and tarantulas darted through the rank weeds and tangled growth; ghastly land crabs excited by the tantalizing smell of fresh blood scuttled to the side of the desperately wounded forming circles about the victim, only awaiting the last quiver of life before beginning the ghoulish feast. Roads and trails there were none; only congested paths through the jungle. Outfits became confused and mixed up; officers lost their commands; commands lost their officers. Such orders as were dispatched often did not reach the proper officer or unit; confusion and uncertainty reigned supreme. And still men continued to die.

A few hundred yards away from our friend lay a volunteer regiment later to become famous in American history; the second in command, in full charge today, was yet to be a President of the United States. The plight of the Americans became more critical; it was safer to inch up the hill toward the Don rather than remain a target of his bullets at the jungle edge. A venturesome few of the enlisted men worked out and upward on the incline; immediately the Spaniard began to feel the sting of American rifle fire; others in khaki and blue joined in the movement and the Krag-Jorgensens spat more viciously now. An iron jawed officer, wearing spectacles, rushed out in front of the volunteer regiment, turning once to glance down the tense expectant battle line, and waved his hat. The boyish bugler dogging the officer's steps raised a battered service trumpet to lips, and the charge blared out on the torrid

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FISH PREDATORS

Sensible Control Measures for Enemies of Fish Life Are Essential

By ALEX P. SWEIGART

IT MAY be said without exaggeration that Pennsylvania today has more fishermen in proportion to available mileage of fishable water than any other state in the union. This concentration of sport fishermen has served to complicate the fishing situation perhaps more than any other factor. So greatly does the demand exceed the supply in most fishing areas that waters capable of peak production of fish life from the angle of flow, cover and forage are literally fished to death. We might note in this connection that the number of streams of this type in Pennsylvania today is exceedingly small, in fact, "peak production" streams may be said to be the exception rather than the rule. It is apparent, when we consider the concentration of fishermen on available waters, that sentiment at the present time favors strong measures toward elimination of factors tending to reduce fish populations. Insofar as this applies to natural predators on fish life, control measures should be dictated by a study of prevailing conditions on different waters and certainly they should not be entered into with an idea of extermination in the background.

Fish predators common to Pennsylvania waters at the present time may be grouped under four major heads: (1) Fish eating birds, including the great blue heron, the green heron, the belted kingfisher, the osprey or fish hawk, and the hooded merganser, a fish eating duck; (2) Animals, the mink and otter for example; (3) Amphibians, outstanding of which is the salamander, commonly called hellbender or waterdog, and (4) Reptiles, notably the common watersnake, snapping turtle and soft shell turtle. While the last mentioned group ranks as a major consideration from the angle of control, some discussion should be given to the other three.

Fish Eating Birds and Animals

Of the creatures that prey on fish, birds perhaps are the least harmful as a group in Pennsylvania. Of those already mentioned, the great blue heron is very adept at taking fish but this bird is not abundant enough to cause concern. It is protected by Federal Law as is the osprey or fish hawk, one of the most picturesque birds in flight frequenting our water courses. The osprey, wheeling gracefully above a stream flat, is a picture of power and rhythm on its hunting course, broken suddenly by its stoop for prey. It drops like a plummet toward the water and so great is the force of its fall that it frequently may be submerged momentarily beneath the surface. We once saw a fish hawk on the Juniata River, near Lewistown, Mifflin County, strike into a fish so heavy that it was barely able to wing above the water for a distance of perhaps one hundred feet before starting to gain altitude. The fish struck on this occasion was a carp that must have weighed at least eight pounds. Close view of the osprey reveals a streamlined bird on which the breast, head, neck and undersurfaces are grayish white, with the upper portions of its body and head and pinion feathers of the wings a dusky brown. Occurring on each side of the head is a dusky streak and the breast feathers are lightly splotched with brown. The graceful blue heron and the osprey are comparatively rare in Pennsylvania and certainly their presence on our waterways lends atmosphere to the angler's day astream.

Of the other birds included in the group, the belted kingfisher may be said to be fairly plentiful. Studies conducted as to its food habits would indicate that much of its forage consists of minnows and other forage fishes rather than game fishes such as the trout and bass, although, of course, it does not hesitate to strike the latter when opportunity offers. The little green heron is a shore wader and varies its diet of fish with toads, frogs, and lizards picked up along the shoreline, while the hooded merganser is amazingly adept in following and taking fish beneath the water surface.

More study is needed as to the food habits of the salamander or waterdog.

One can readily understand and sympathize with the efforts of naturalists to preserve bird life along our waterways. The role played by feathered predators in aiding nature to maintain her balance on fishing waters is not to be dismissed lightly.

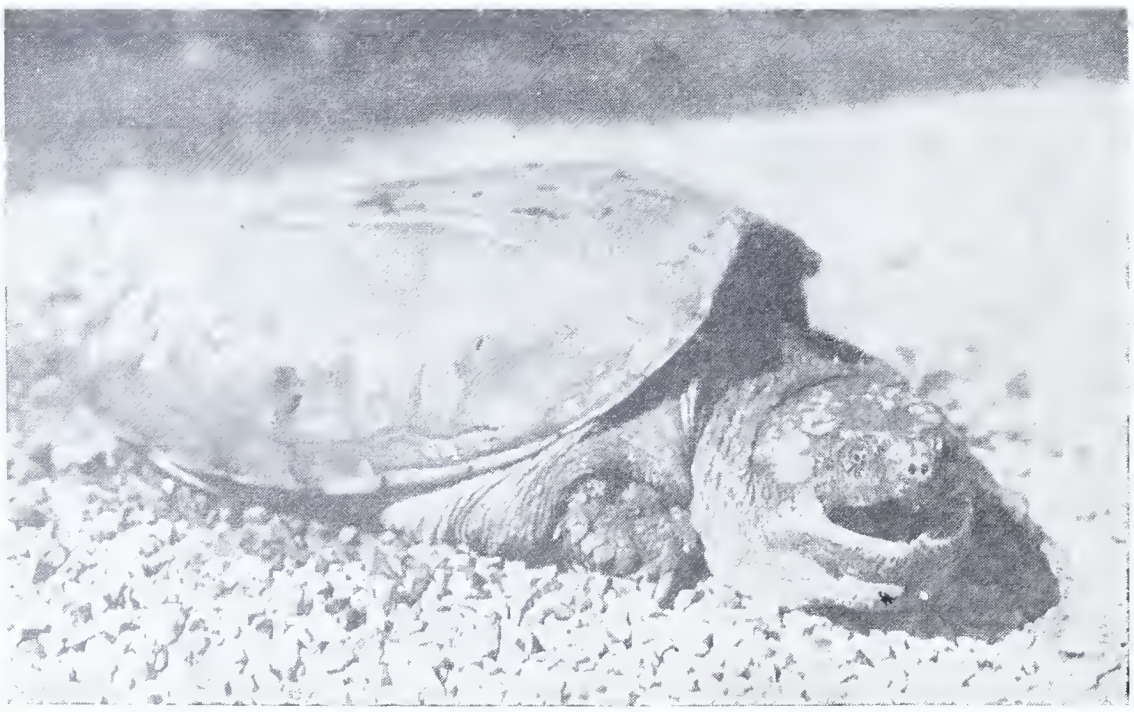
Fish eating animals such as the mink and otter may be dismissed from consideration simply because they are sufficiently rare that their incursions are of minor consequence.

Amphibians

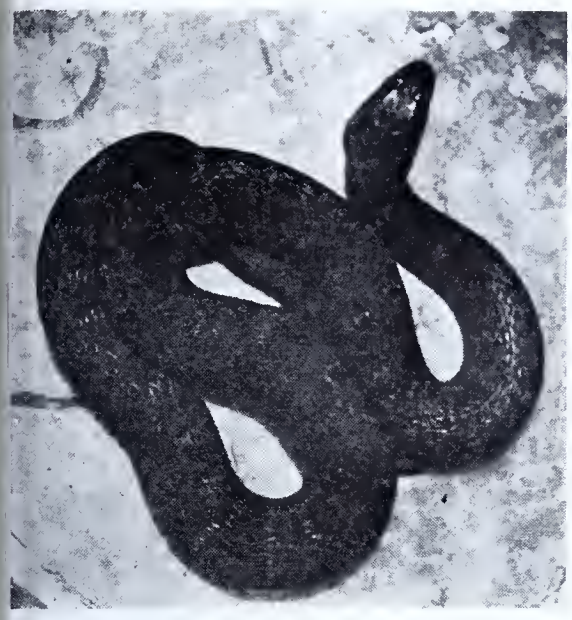
While, in this group, the bullfrog will, when occasion permits, take fish, the outstanding predator among the amphibians is the salamander or waterdog. A study of stomach contents conducted on waterdogs by A. B. Champlain, entymologist for the Department of Agriculture, revealed that many crayfish were included in the diet of this ugly stream denizen. The waterdog, occasionally achieving a length of 30 inches in Pennsylvania, is a nocturnal feeder, doing its foraging at night or when streams in which it occurs are extremely muddy. This tendency alone probably accounts for the large number of crayfish taken, and since these crustaceans rank as our most vital bass forage, an abundance of salamanders in our better bass waters is to be regarded as definitely undesirable. Further study as to its possible spawn destroying tendency is needed.

Reptiles

Of these predators, the most voracious and deadly is the snapping turtle. Equally adept at taking fish is the soft shell turtle occurring in a few waters in northwestern counties. Both are to be ranked as outstanding enemies to fish life, but because they are not so abundant as the watersnake in most streams and lakes, the latter must be reckoned fish enemy number 1 in Pennsylvania.



Ace reptilian predator on fish life in Pennsylvania is the snapping turtle. This big fellow, weighing 19½ pounds, was caught in Chickies Creek, near Manheim, Lancaster County, by Charles Martzall of Manheim.



Flat rocks are favorite sunning places for the common watersnake.

While control of the watersnake has been stressed during the past seven years, measures advocated have centered about keeping the snake population on hard fished streams within reasonable bounds. As a matter of fact, it is ridiculous to assume that even under intensive hunting the number of watersnakes could be reduced to the point of extermination. Characteristics and environmental conditions on most waters frequented by this predator favor it exceedingly. Protective coloration causes it to blend almost perfectly with its surroundings, the birth rate is high, mature females frequently bearing from 25 to 40 live young, and finally, it is one of our most active and agile snakes.

It would seem that a major portion of the defense of any destroyer of wildlife rests in the argument that, when fish and game were most abundant, these same predators existed in far greater number than they do at the present time. At first glance, this argument might appear logical. But is it? Have not two factors entered under modern conditions which completely alter the perfect picture of primitive "balance of nature"? Let us consider these two altering factors—radically changed environment and an increasingly heavy kill of fish and wildlife by modern fishermen and hunters, equipped with highly specialized tackle, shotgun and rifle.

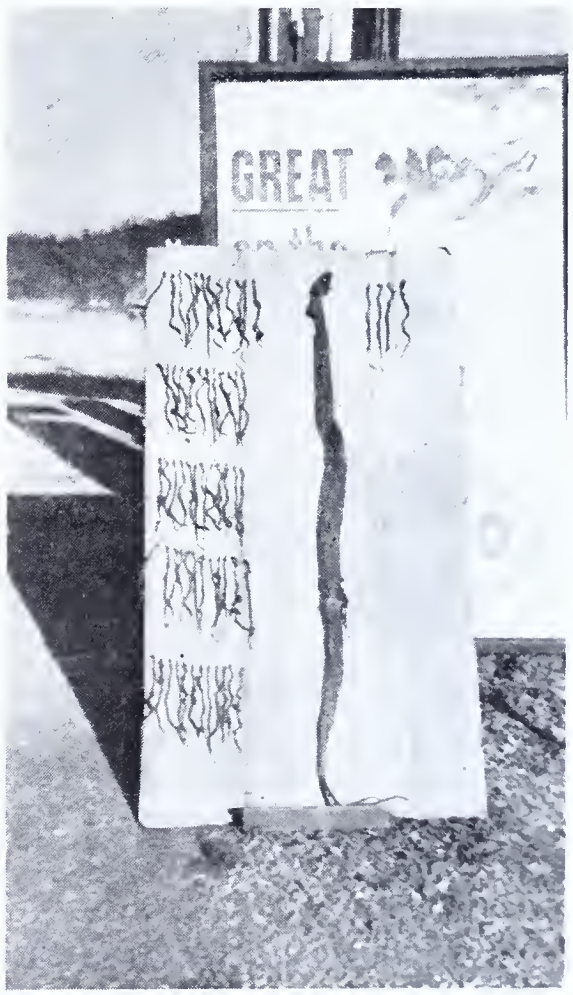
Radical changes have occurred during the past century in environmental conditions under which fresh water fish life must exist. In highly industrialized states, stream pollution is a major limiting factor. Cutting of the forests on their drainage areas and intensive cultivation of the soil have drastically affected many of our trout streams, making them subject not only to disastrous flood and drought but to the damaging influence of sediment and silt washed into them. These changes have come with the development of Pennsylvania into a great industrial, mining and agricultural Commonwealth.

Changed environment also has seriously curtailed the productivity of our waters insofar as reproduction of the various species of fishes is concerned. The sucker, for example, running upstream in a smaller tributary to its home water to spawn may find its way blocked by a dam. In the frequently fast and high water at the base of the structure, the adult fish are forced to deposit their eggs with subsequent loss of most of them. Of trout eggs deposited naturally, it has been estimated by competent fish authorities that perhaps not ten per cent ever are hatched because of silt and other unfavorable stream conditions.

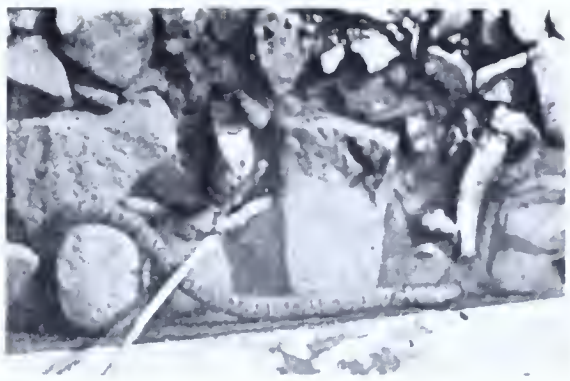
Of vital significance in control of fish and game is the sportsman. Insofar as game fish are concerned, we have observed during the past ten years amazing improvement in tackle for the taking of cold water species such as the trout, and warm water gamesters including the bass. Gut leaders, improved artificial flies for trout and light casting lures with vastly improved action have aided the artificial lure fisherman in his sport. The number of skilled fly fishermen and bait casters has undoubtedly been increased by production of better rods, lines and casting reels at reasonable cost. It is only fair to assume that the tendency for greater skill and effectiveness in taking fish on rod and line will grow from year to year, and that the annual catch of game fish in our waters will increase accordingly.

The range of the watersnake in Pennsylvania includes both trout and warm water streams. It is an extremely adept reptile in taking trout, particularly during periods of low clear water on our mountain and meadow streams, a condition that has prevailed during the summer months virtually since 1930.

Instinctively timid fish, trout when alarmed often seek protection beneath an overhanging bank, a submerged log or a rock. The watersnake in its hunting is quick to take advantage of this trout tendency. Gliding into a pool, it often follows its quarry to the place of shelter and experiences little difficulty as



An all time record in number of young was set by this giant watersnake killed at Kerchner's Mill at Lenhartsville by William Dannenhauer and Russ Smith. An old female, measuring 50 inches in length, it was found to contain 67 young, according to John Ott of Lenhartsville.



This watersnake has just taken a good size trout.

a general rule in cornering and fastening to the fish. Instances are on record of the finding of from six to 10 trout in the stomach of a watersnake.

This agile reptile must also be ranked a major natural enemy to trout over legal six inch size that have just been stocked. Until these fish raised under hatchery conditions become acclimated to their changed environment, the watersnake is very often capable of taking many of them. A snake of medium size, owing to the peculiar ease with which it may expand its jaws, may swallow without much difficulty a 9 or 10 inch trout. While not so numerous generally on trout streams as it is on warm water streams and lakes, the usual size of trout waters must be considered. Even though a smaller number of snakes may be present on a meadow or mountain stream, they make serious inroads on the trout population during low water periods.

On warm water streams and lakes, forage fishes and suckers constitute a heavy percentage of the watersnake's kill. We have stressed in the past the vital importance of an abundance of minnows, stone catfish and other forage fishes in game fish areas. Shiners, chubs, fallfish, other species of minnows and stone catfish are secured by the watersnake in large numbers. Bullhead catfish and suckers also are taken frequently. It has been observed on streams where the stone catfish occurs that this species is subjected to heavy inroads by the watersnake. Stone catfish are by nature roily water or night feeders, usually lurking beneath rocks or other cover during the day in periods of clear water. It is comparatively easy for the watersnake to corner these forage fish and seize them.

Because our forage fishes are being subjected to heavy inroads by game fishes such as the bass, pickerel and wall-eyed pike in addition to the drain being placed upon their number for live bait purposes, this tendency of the watersnake constitutes its greatest menace on warm water fishing areas. By way of illustrating the competition for live forage by game fishes, let us turn to Lake Wallenpaupack in Pike and Wayne Counties. This famous inland fishing ground affords two outstanding varieties of fish life, if we except their own young and the young of other species, upon which the protected game fishes may prey, the young of the yellow perch and the golden shiner. Competing for this food supply are the adult perch, the small mouth bass, the largemouth bass, the wall-eyed pike, the bluegill sunfish, and the rock bass. Of course, the young of the sucker, bullhead catfish and sunfish furnish some food, but the brunt of the entire season's feeding, because it is of most suitable

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THOUGHTS AT A FISH FRY

By C. GORDON KRIEBLE

THE sound of excited shouting and intermittent laughter brought a strange silence to the usual morning babble of woods voices. Frogs crouched in awkward positions along the lake shore, fearful of being trod upon and not a turtle dared assume his place on a log for his customary sunbath. People and boats seemed everywhere as the Georgia folks heralded the first day of the fishing season with holiday abandonment and a swishing of lines.

Many of the men folks arrived at the lake the night before and gathered in little groups around bright fires to talk and doze impatiently until midnight. At the stroke of twelve (or there abouts) the fishing began. In the blackness of a swamp night fishing was a messy sport but no one seemed to mind. A "frog" owl looking down on the nocturnal activities had hooted his dislike for the disturbance and then flown away on silent wings.

The pale light of dawn, filtering down thru the dense foliage of great trees, lighted the way for early morning arrivals and disclosed increased activity on the part of the night fishermen. Singly and in little groups they emerged into the clearing, back from the lake shore, to rekindle the night fires and place great iron frying pans over the glittering blazes. Deep fat was soon hot and fish, rolled in corn meal, were plunged into the pans.

A tantalizing aroma filled the clearing and stirred late comers to an increased pace as they unlashed long bamboo poles from their cars or paused to inquire "How air they bitin'?" Great strings and bags of fish mutely testified they were "'bitin' right smart" and sent anxious feet down the pathway to the lake.

Prompted by the curiosity any Pennsylvania fisherman might experience in such a strange, bountiful fisherman's paradise we moved among the friendly groups of late comers and followed them to the lake.

Some, we saw, preferred to fish from boats while others chose the banks or were too late to get a boat. The fish showed little preference for one line or bait over the other. Earthworms and crawfish were the most popular baits but cut-bait and "catawba worms" were no less effective. Little was attempted in the way of artificial lures.

The nine to twelve foot bamboo poles were predominate and the line attached to each pole seldom exceeded the length of the pole itself. A rod and reel outfit could hardly be called a curiosity but such a "rig" was looked upon by many with a certain amount of disapproval.

The morning light was still too weak for us to begin any photographic work so we sat and watched, with critical eyes, as fish after fish was landed or lost. Something inside of me seemed to revolt against the methods I was witnessing. It seemed almost primitive to bait a hook and swing a short line to the water wait a few minutes for a bite and then jerk a fish out of water without any finesse whatsoever. Only the larger fish were capable of forcing a brief play and once hooked on stout tackle their play was all too short.

The soft shell turtle abounds throughout the swamp country and is so named for its leatherlike shell. The periscope nose on this 18 pound turtle comes in handy, according to the writer.

My hands itched to grip a light bamboo rod that would bend nearly double under the strong, stubborn fight of a mudfish (bowfin), one that would force me to pay-out line time after time before he was subdued. I yearned for the powerful run of a bigmouth bass and the thrill of the uncertainty of a splashing leap and a brief slack in the line.

I knew my weakness for fishing and I refused to tempt my self restraint by purchasing a license. I had returned to this paradise, with my little party, to photograph its myriad of wildlife and not to lapse into a "fishing coma."

A friend of ours was drifting slowly up the lake toward where we were sitting. He was using an 8½ foot steel rod, a level wind reel and a light line, the only tackle of its kind on the lake that morning. Our eyes, green with envy, followed his every move. As he neared a point less than twenty feet from shore he glanced up and smiled a smile of sympathetic understanding. In that instant things began to happen. Deep in the dark waters a "man-size" fish had grasped the bait and started, with a grim determination, for still deeper water.

Judging from the strike and run it was likely to be a big "mud" and with the care and skill of a veteran Luke set the hook firmly and the battle was on. No words at my command could begin to tell the story of the next nine and one half minutes. At times it seemed some part of the tackle had to break under the old "mud's" furious rushes but each time that calamity was skillfully avoided. During the long sulking periods nerves were tried to their utmost. To have attempted to lift the "mud" off the bottom by sheer force would have been fatal to the light tackle. Each sulking period was climaxed with a mad rush to the surface and each rush was unpredictable.

Just when it seemed the fish should be exhausted it managed to exceed all expectations in violence, until, at last, it acknowledged defeat and turned "belly up".

It is difficult to say who enjoyed the battle the most for at its completion we all relaxed by freely lavishing praise on the fighting qualities of the fish when it was given a chance to battle light weight tackle. It was not the largest "mud" we had ever seen but 7½ pounds of fish on a light outfit can and does provide a lot of sport.

The aroma of frying fish grew stronger and more tempting as pan after pan was filled to capacity by the little crowds in the clearing and we wandered back along the path to watch the culinary activities. Generosity was the keynote of a fish fry and each party offered us choice bits of fish as we stopped to chat.

The festival spirit dominated the scene but somehow I couldn't bring myself to enter into the mood wholeheartedly. It seemed unreal, as tho I was living in the long forgotten past. Men and boys crouched or stood around the fires eating fried fish from their fingers, just as I was doing. There were no plates or forks or other foods, just fish.

That was it—just fish—fish everywhere I looked. I hesitated to estimate the numbers that had already been caught. Huge strings of fish—bags of fish—tubs of fish! It didn't seem possible. These people were enjoying

a primeval abundance of fish in the 20th century. I decided to try to learn something of their feelings in regard to this finny luxuriance.

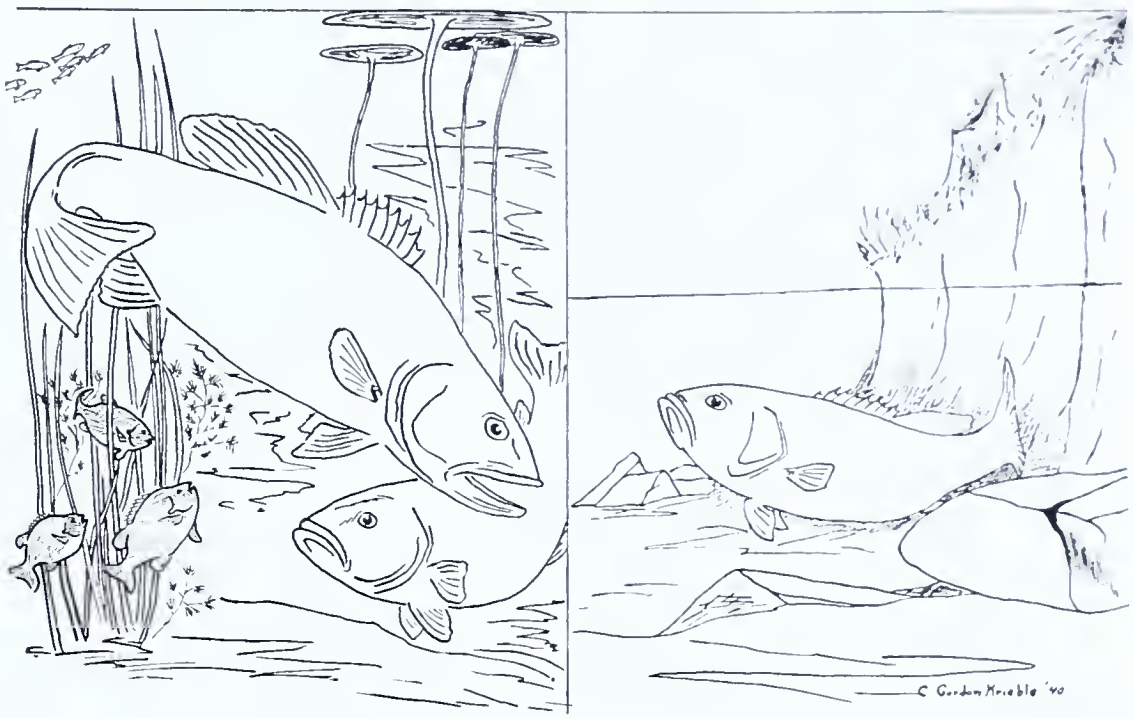
"How's luck?" or "How are they bitin'?" brought quite unexpected replies "No good!" "Kinda poorly!" These replies were generally elaborated on while we nibbled the fish they offered us. Each story strongly resembled the other and usually began, "Why Ah remember when Ah was a young 'un we all'd hitch up the horse (or mule) an' drive down here an' do some real fishin' with a seine. We'd git a couple o'barrels o' fish without no trouble a'tall."

Some of these stories may have been slightly exaggerated but in effect they matched perfectly. Today a small group of fishermen considered a wash tub full of fish a poor haul, even tho the catch consisted of more fish than the combined families of the group could consume in any one day. Yes—it would be a poor haul compared to the hundreds of pounds of fish they might have taken with a seine.

Story after story was told with the enthusiasm of delightful reminiscence. There seemed no END to the tales of pillage—pillage by nets and traps—dynamite and poison—and NO BEGINNING of appreciation for the natural heritage of these waters.

At last came a story that held my deeper interest. It was the story of a group who came down to "clean-out" the lake with the aid of a 300 foot seine. They knew a family living near the lake depending greatly on its fish for sustenance but that seemed to make little difference.. The first night was marked with exceptional success and the fish could not be taken away in their one wagon so the surplus was strewn around the ground for the half wild hogs of the vicinity.

This same group returned to the lake a few days later to complete their mission and were infuriated by the fact that the family



Plenty of vegetation often means plenty of food and plenty of fish.

who depended on the lake for so many of their meals had felled large trees into the lake in such numbers as to render seining a highly unsuccessful enterprise. The bleached skeletons of these same trees still raise their finger-like branches above the dark surface of the water as tho to warn of the impracticability of wholesale plundering.

I left my companions in the company of one of these little groups on the pretense of going for my cameras but I wanted to do a little thinking. I had only ever read about such large scale destruction in books as having happened many, many years ago but here it was, a first hand story not many years old and as a matter of fact still in operation but on a somewhat smaller scale. It seemed incredible that people today should still have such utter disregard for the value of wildlife as to sincerely regret they could not continue these practices on a large scale. It seemed incredible until I considered the history of these people and this country.

For generations the lake had provided an apparently endless supply of fish for the few families who lived nearby and no efforts on their part had ever had any more effect than to cause a temporary decrease in the fish population. The lake was connected by an "outlet" run to the great Okefenokee Swamp, a short distance away and the swamp was a massive, natural hatchery, capable of replenishing the lake endlessly each time the water level was high enough to permit a fish migration up the connecting run.

Times had changed greatly, in at least one respect, and the fishermen were no longer limited to a few local families but were coming from all parts of the county, from outside the county and from outside the state. Many of these "Outsiders" appreciated the existence of such a fishermen's paradise but still their greed, in a land of plenty, was appalling.

To be sure there are fishing laws in Georgia and they include a generous creel limit. Furthermore the present owner of this lake employs a man to look after the boats and to keep his eyes open for "fish hogs". Despite these regulations the take of fish, tho generally legal, seemed so great as to appear wasteful. In many cases the fish had to be transported a great distance, in hot weather, and ice was seldom employed. Terrific loss thru this method was readily admitted.

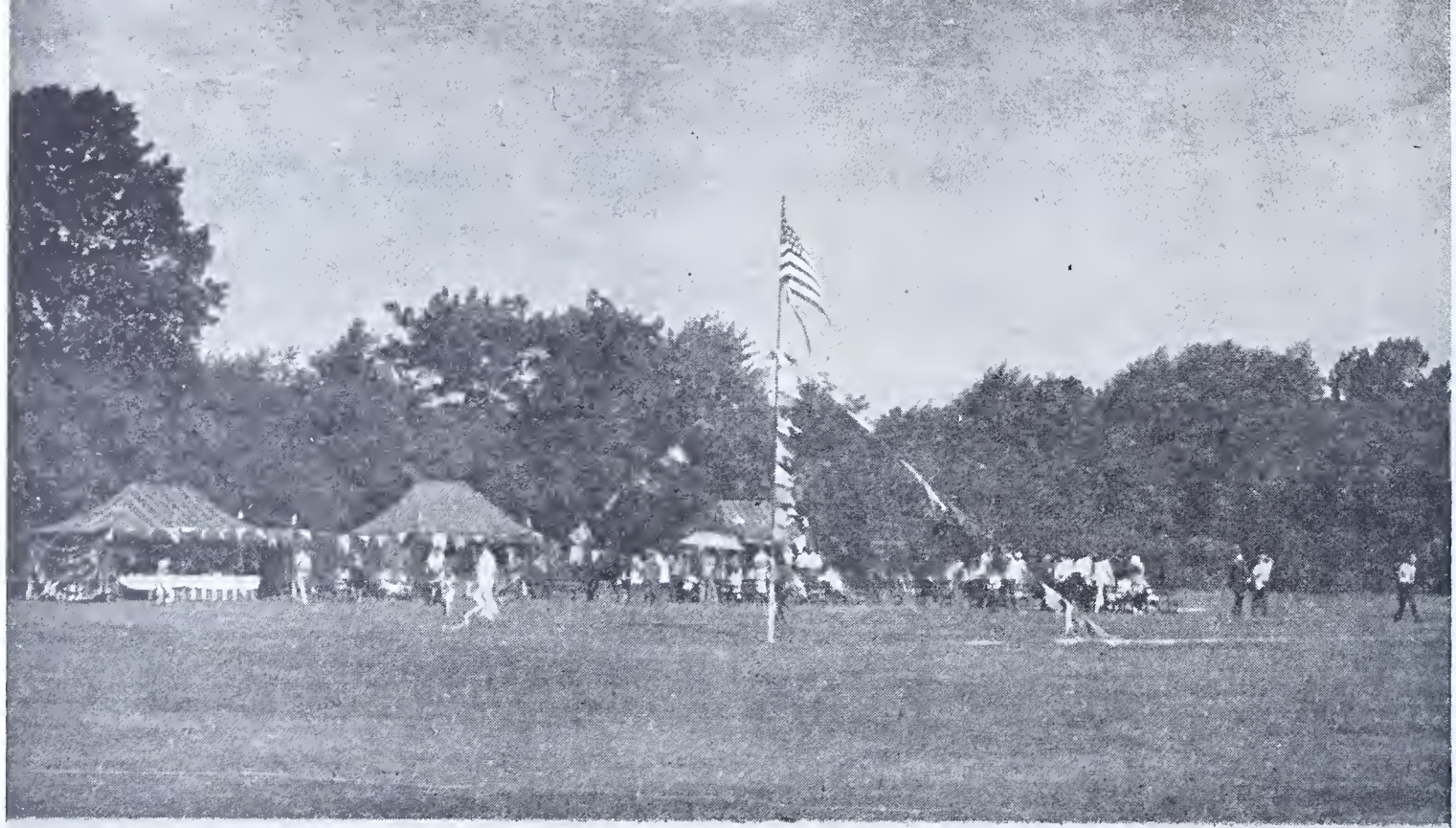
I walked down to the lake and sat down on a log to try to analyze the picture a little further. The stories I had heard were not entirely new to me but the scenes I was witnessing were and yet—

In my imagination I wandered back to Pennsylvania, the Pennsylvania of years ago and I saw fishermen—fishermen with gill nets and seines—fish baskets and dynamite—gigs and set-lines. Fish were plentiful but the destruction of fish was even greater. Then came pollution and streams trickled with the hollow gurgle of desolation.

Cries went up from countless fishermen regardless of the part they may have played

(Continued on Page 18)

Typical swamp pond, teeming with fish of all sizes, turtles and alligators.



CEDAR PARK CASTING FIELD WAS ALL DRESSED UP FOR DOVER DAY.

Twentieth Annual Casting Tournament

Of the

Dover Fishing Club

By William J. Ellis Sr.

EARLY on Sunday morning, September 22nd, two cars traveled westward across the Delaware River Bridge in the direction of Philadelphia. The cars were dusty and the occupants looked tired. They *were* tired. For a good reason. During the past ten hours they had covered nearly three hundred miles from Taunton, Massachusetts. An all night ride.

Continuing westward out Vine Street they passed the Free Library; rounded the Franklin Institute; and crossed the Schuylkill. An eating establishment on the West Side displayed a sign, "Breakfast is Ready". The driver of the leading car pulled over to the curb and called to his companions, "Boys, let's eat."

Patrolman O'Day had just finished his morning "Java" after an eventless night in the 46th ward. Nothing ever happens in the 46th ward and Patrolman O'Day was bored—sleep all day Sunday and the same old beat tonight. Wotta life. Just then the swinging doors of the restaurant opened and in tramped seven husky looking gentlemen, typical outdoorsmen, every one of them.

Spotting the lone occupant, the leader turned to one of his companions, "Hey, Clint, here's a cop at last; he ought to know where we're going."

Then more respectfully to the law, "Officer, can you direct us to the Cedar Park Casting Field in Fairmount Park?"

Patrolman O'Day smiled. Here were strangers in need of service and that was his specialty—service. "Sure, that's where the Dover Fishing Club have their casting tournament every year about this time. Where're you fellows from?"

WILLIAM J. ELLIS SR.
PRESIDENT OF THE DOVER
FISHING CLUB.

"Taunton, Massachusetts."

"What! You drove all the way down here to Philly just to cast?"

"You guessed it brother. And how's the breakfast in this place?"

"Best in the city. But say, about this casting business, I'm off duty for the day. How about taking me with you? I'll show you the way. Think I'd like to see one of these Dover Club Tournaments."

Patrolman O'Day wasn't bored any more. These men were sports. The spokesman was none other than Walter H. Davis, President of the Ab-A-Da-Ba Surf Club of Taunton, Mass. The tall "husky" whom he had addressed as Clint upon entering the restaurant was Clinton Atwood, holder of the Vanderbilt Cup, symbolic of the surf casting championship along the New England coast and contested for each year at Narragansett, Rhode Island. Others in the party were Sam Walkden, Dave Obshatkin, Harry Carmody, and Tom Spencer, all members of the same club and famous as sportsmen and casters throughout the New England States.

These men had made the three hundred mile trip to be on hand at the twentieth annual open casting tournament of the Dover Fishing Club of Philadelphia which is one of the casting classics in the East. They had been reading about some of the remarkable

FORMER WORLD'S CHAMPION, HAROLD G. LENTZ, DEMONSTRATES HOW TO PUT "EVERYTHING" INTO THE CAST.

CHARLES VOLLUM, PRESIDENT OF THE ASSOCIATION OF SURF ANGLING CLUBS PRESENTING BOB EAGLES WITH THE NATIONAL BOYS CHAMPIONSHIP MEDAL.

BARNEY BERLINGER, FORMER PENN ATHLETE, WHO HAS BEEN CLEANING UP THIS SEASON IN PLUG DISTANCE CASTING.

BACK-LASHES ARE THE "BOGEY" OF THE SURF CASTER, THAT'S RALPH BOWMAN DOING THE WORK.

EASTERN SURF CASTING CHAMPION 1938, 1939, AND 1940. RALPH BOWMAN STARTING ONE OF HIS FAMOUS "500" CASTS.

OH, GRACIE! DON'T YOU THINK MR. BEAM SAYS THE FUNNIEST THINGS WHEN HE'S ANNOUNCING? I DO.

WHAT'S GOOD ENOUGH FOR KING GEORGE IS GOOD ENOUGH FOR OFFICER O'DAY. GIMME A HOT DAWG.

MRS. AL. PITTMAN, OF TRENTON, N.J. HASN'T MISSED CASTING IN A DOVER TOURNAMENT SINCE THEY STARTED HOLDING 'EM. SHE WASN'T MRS. PITTMAN THEN.

JOSEPH O'BYRNE, DIRECTOR OF THE K.Y.W. HUNTING AND FISHING ACTIVITIES, WAS A HANDY MAN WITH THE LADIES. THAT'S JUST COFFEE.

THE YOUNGEST CASTER WAS NINE-YEAR-OLD JIM WECHSLER OF VENTNOR N.J. HIS CAST WAS 116 FT.

ELEVEN-YEAR-OLD GEORGE LENTZ, A MEMBER OF THE DOVER CLUB'S JUVENILE CASTING CLASS, RANKS HIGH AMONG THE BOY CASTERS.

SIDELINE ATTRACTIONS.

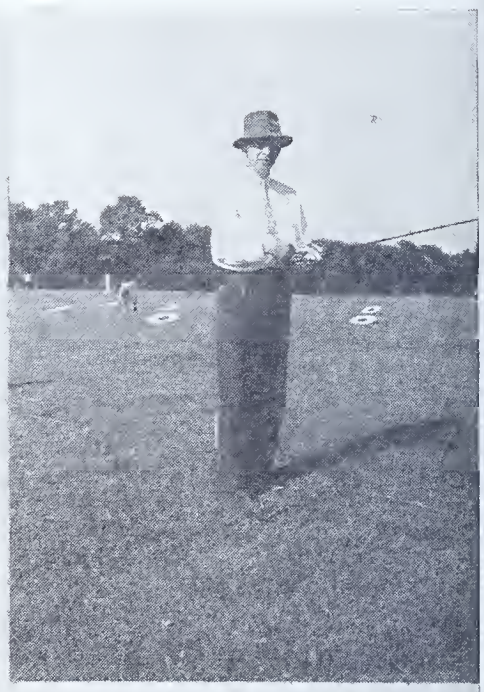
ON THE FIRING LINE, PLUG CASTERS AWAIT THEIR TURN AT THE ACCURACY COURT.

HANDS OFF, YOU FOLKS! THEY'RE FOR THE WINNERS. A VIEW OF THE PRIZES.

HARRY FASKE OF TRENTON, N.J. SHOOTING AT THE SURF ACCURACY TARGETS.

STANLEY ZIMBA, EXPERT PLUG CASTER AND WELL KNOWN BIG GAME FISHERMAN.

H. WILLIAM SHANER, SECRETARY OF THE ASSOCIATION OF SURF ANGLING CLUBS.



HOWELL I. DIETHRICH, OF THE LOWER MERION ROD AND GUN CLUB.

feats with rod and reel performed by Bowman, Vollum, Lentz and other Dover Casters during the current tournament season. So, if Ab-A-Da-Ba casters wanted to be on the map this year, they had better go down and meet these phenomenal lead tossers on their own grounds.

Arriving at the field they were greeted by groups of casters from Long Island, Margate, Belmar, Ventnor, Trenton, Atlantic City, Wildwood, Ocean City, Wilmington, Baltimore and many other sporting centers throughout the East. Perfect weather prevailed for the twentieth successive "Dover Day" in as many years. That's a record of some kind or other, and since records are in line at Dover tournaments the weather man decided to make one. Or, maybe he's a fisherman. Huh?

This year's contest attracted extra attention due to the Dover Fishing Club's remarkable victory in the Ocean City Cup Event last August when they set a new record for "all time" surf casting in the Association of Surf Angling Clubs. Two large rectangular courts over 500 feet long were kept busy with the distance surf events during the entire day while a special surf accuracy court was a big attraction. Plug casting with both the 3/8 ounce and 5/8 ounce plugs kept nearly a hundred bait casting enthusiasts busy with distance, accuracy, and novelty events.

Tony Pyler of Belmar, New Jersey, ran away with the 5/8 ounce distance event, making a cast of 266 feet, 3 inches. The next highest in this event was Barney Berlinger, the Philadelphia caster who has been cleaning up around this territory with his plug casting during the past season. Barney was handicapped by sticking to that "nine pound test" rule recently adopted by the N. A. A. C. C. If he had taken advantage of the Dover policy to encourage tournament equipment he might have added considerable footage to his 216 feet, 10 inches. Joe Hirsch of the Dover Club finished in third place with 168 feet.

The Wilmington Casters took high honors in all the Plug Accuracy events although Hobart Lavin of the Dover Fishing Club and George DeGorgue of the Pennsylvania Fish and Game Protective Association finished well up among the leaders.

Among the "salties" a close race has been run this year by Ralph Bowman of the Dover Fishing Club and Harry Faske of Trenton, New Jersey, for honors in the Association of Surf Angling Clubs. Up to this time Ralph was leading Harry by the close margin of three points. However, by taking first place in both of the distance surf events Bowman came through with the 1940 championship, making his third successive year. W. H. Davis of the Ab-A-Da-Ba Surf Club pushed the champion pretty hard for both the average and the longest cast. He succeeded in taking second honors for the day.

A special juvenile event attracted twenty-seven youthful casters ranging from nine to fifteen years of age. These youngsters competed for some very fine prizes. A number of them were products of the Dover Fishing Club's juvenile casting classes held throughout the past summer. A complete description of these classes was given in the July issue of PENNSYLVANIA ANGLER. At the conclusion of this event the National Boy's Championship Medal was awarded to Bob Eagles of Belmar, New Jersey. The presentation was made by President Charles Vollum of the Association of Surf Casting Clubs. Bob is a protege of Fred Eyers, who for several years has conducted a juvenile casting school in Belmar similar to that of the Dover Fishing Club.

The youngest caster in competition was nine year old Jim Wechsler, of Ventnor, New Jersey. Jim took the honors in the Class "B" boy's event for longest casting by achieving a distance of 116 feet.

W. Ward Beam of the host club kept some five hundred guests interested by announcing the events in their regular order. His steady stream of balderdash mixed up with some snappy comments on the different contestants was very entertaining, particularly to the ladies. Ward will be remembered as the famous impersonator of Sir Isaac Walton in the Greater Philadelphia Pageant several years ago. The announcing was later taken over by H. W. Shaner, Secretary of the Association of Surf Angling Clubs, who in the course of events introduced a number of guests prominent in angling circles.

The tournament was one of the finest ever staged in this vicinity. A strong cross-wind which prevailed throughout the day prevented any new records from being made. However, all of the contestants were in good form and the close competition for high honors kept the spectators thrilled right up to the last minute. The results of the events were as follows:

Plug Casting Events

3/8 ounce plug for accuracy: 1st, tie between Bill Schmidt of Wilmington and Hobart Lavin of the Dover Club; 3rd, Bill Derr, Holmesburg. Score 85. 5/8 ounce plug for accuracy: 1st, Sam Wilhelm, Wilmington; 2nd, Howard Milligan, Wilmington; 3rd, George DeGourgues, Pennsylvania Fish and Game Association. Score 94. 5/8 ounce plug for distance: 1st, Tony Pyler, Belmar, New Jersey; 2nd, Barney Berlinger, Pennsylvania Fish and Game Ass'n; 3rd, Joseph Hirsch, Dover Fishing Club. Distance 266 feet, 3 inches. 5/8 ounce plug novelty event: 1st, Hobert Lavin, Dover Fishing Club; 2nd, Stanley Zimba, Holmesburg; 3rd, Al Pittman, Trenton, New Jersey. Score 47.

Surf Casting Events

Average of three casts with 4 ounce lead: 1st, Ralph Bowman; 2nd, Walter H. Davis; 3rd, Lawrence Guarina. Distance 475 feet, 5 inches. Longest of three casts with 4 ounce lead: 1st, Ralph Bowman; 2nd, W. H. Davis; 3rd, Harry Faske. Distance 492 feet, 7 inches. Accuracy cast with 4 ounce lead at unknown distance: 1st, Frank Young; 2nd, John Malone; 3rd, Dave Obshatkin. Score 5.

Juvenile Events

Average of three casts: 1st, Bob Eagles; 2nd, George Lentz; 3rd, Al Breman. Distance 351 feet. Longest of three casts: 1st,

Michael Coffee; 2nd, Bob Eagles; 3rd, George Lentz. Distance 392 feet, 5 inches.

About 5:30 P. M., there was quite a commotion among the spectators as patrolman O'Day jumped up from a comfortable park bench, where he had been sitting all day, and yelled, "Hey, I gotta go on duty at six o'clock and ain't had no sleep. So long! See ya next year."

WHY BOTHER!

(Continued from Page 3)

to take hold. This year the number of fly and plug casters has increased beyond all expectations. The use of bait is dying fast and should almost disappear in a few more years.

You may ask, how was it done? The answer is simple. Charlie, Don, Bob, Lou and others first proved to a few that they could catch more and bigger fish by using artificials. They took them onto the Susquehanna and caught bass and wall-eyes (salmon to the natives) easier and bigger than the others had ever seen. The others tried it and it worked for them. The story spread fast and today these sportsmen are designing their own flies and plugs and getting a thrill out of their fishing which they never did before. They hold casting tournaments and make hundreds of dollars with which they stock their streams.

These are just ordinary fishermen. They had one idea—to catch all the fish they could—the same as you and I. Now many of them never bring home a fish, others only a selected few. In some sections they have laws voted by the club members limiting the trout catch to two fish not less than 10 inches long. The state limit is 10 fish, 6 inches or over.

They are a great bunch of fellows and it's a real pleasure to be among them. I have opened the last three trout seasons with them and had the time of my life, averaging around 30 trout each opening day, of which I have kept about 2 that were injured. This year (1940) my largest was a 17½ inch, 2½ pound rainbow; the smallest about 8 inches, the average from 10 to 13 inches, browns and rainbows. The big rainbow was tagged and we took it to another section of the Yellow Breeches and released it. That night, on the radio, I told of its release and offered to give an autographed fish book to the one who caught and reported it to the Board of Fish Commissioners, who backed the offer. A couple of weeks later the fish was caught but not reported. It is too bad that fishermen are afraid of tagged fish and don't report them. We need more publicity to show our sportsmen that they would be helping the authorities by reporting tagged fish and game, that there is nothing to be afraid of.

I mention these opening days because each time we fished side by side with a larger number of bait fishermen, of whom some were having no luck at all. Their reactions to our fishing, our luck and the releasing of the trout were typical of those who do not use the artificials nor understand our viewpoint. Yet some of them have since tried them out, due to our success, and are now the ones who are releasing their fish.

The funniest reaction came on my first trip in 1938, when we went to Boiling Springs for the opener. It is a big spring covering a couple of acres and full of both trout and food. It is tricky fishing and often, while hundreds of trout are rising, no one is catching them.

Later that day I got into a rise of rainbows running about 14 inches in size. I took 10 in quick succession and released them all. Charlie was walking along the bank a short distance away and saw two fellows taking their rods apart, apparently disgusted. When he asked them why they were quitting, they pointed at me and said—"What in He— is he fishing for if he doesn't want the fish? They ain't bitin' for us and we'll be d—d if we'll sit here and watch him pull 'em in and put 'em back!" And home they went.

Others, however, took a more sensible view of the matter. They realized that if artificials were better than bait, then they would use them too. So they asked questions, took notes and later became fly addicts.

Putting fish back in the water is only one of the ways the use of artificials can help conservation. We must conserve not only fish but their food. It's just as foolish to take the food out of the water in which there are fish as to put fish in water where there is no food. Yet for years we have been doing both with the full consent of our law makers.

One of the big steps forward needed in conservation is to stop the taking of bait food from our waters and, instead, to start stocking the waters with food as well as fish. If necessary, bait fishing should be prohibited by law. Not that it could be done now—the bait fishermen would raise such a howl that the politician would have to find an air raid shelter.

There is a better way to do it. Start an educational campaign that will show the fisherman that he can catch more and bigger fish on artificials. That is the only reasoning that will appeal to him. After he is converted to that idea, let nature take its course. Once having used artificials and been relieved of the arduous task of obtaining and keeping bait and the mess of handling it, and rebaiting constantly, the ease of handling the artificials, the better results and longer seasons will keep him from ever returning to bait fishing. When that happens, he will be glad to have the law passed but then it won't be needed.

So it is up to us—not to belittle bait fishing nor to preach conservation—but to show how much better and easier fishing with artificials really is. Don't harp on putting fish back but on how they can catch more. Play them along on that lure and they will take it, hook, line and sinker. After that conservation will take care of itself.

Don't try it on the old flea-bitten fisherman, he's too hard a nut to crack. Start in with the young ones. Form sportsmen's and conservation clubs in the schools. Teach them how to tie flies and make artificials of all kinds and how to use them. They will never become bait fishermen. If you were to ask them why, they would say—"What—go to all that fuss and bother when I can have more fun with flies? I should say not!"

They would be right. Why bother when you don't have to!

TIADIGHTON CLUB NOW ESTABLISHED

Organization of the Tiadighton District Sportsmen's Association was launched by 30 men from Cedar Run, Antes Fort, Slate Run, Jersey Mills, Salladasburg, Avis, Larryville and this place, meeting at the Jersey Shore Y. M. C. A.

Purpose of the group will be directing efforts toward securing more *fish and game* for streams and wooded areas in the district, co-operating with the Department of Fisheries in conserving forests and streams, and seeking assistance from farmers in the area for opening additional lands for sportsmen.

One of the first moves, officials said, will be to direct a drive against illegal trapping, allegedly being done in the district.

Named to an executive board to serve for the ensuing year were: Lewis Huff, chairman; Robert Smith, Frank L. Schoendorfer, all of Jersey Shore; Leonard Heller, Avis, and Arnold Sundburg, Jersey Shore, who was designated as secretary-treasurer.

Additional members will be added as the membership from the various outlying communities accumulates.

Plans were formulated for a concentrated 3-week membership drive, opening today. At the end of the time, another session will be held and officers will be elected and by-laws adopted. Tentative by-laws were discussed at the meeting. One provides membership is open to members of other sportsmen groups, but such members will not be eligible to hold office.

Organization of the group was said to have been the result of seven years of effort trying to secure more consideration for the area.

Moved by Hollowood, seconded by Secoy. that the Secretary telegraph the Governor relative as to why the vacancies on the Fish and Game Commissions were not appointed. The reply to be published in the United Press. Motion carried.

Moved by Van Cleve, seconded by Secoy, that a committee be appointed to publish the reply from the Governor. Motion carried. The Committee—I. G. Moyer, Greensburg; J. E. Van Cleve, Waynesburg; Robert C. Yake, Youngwood.

PYLE SPEAKER AT STRASBURG

More than sixty persons attended the first fall meeting of the Strasburg Sportsmen's Association held in the I.O.O.F. Club rooms in Massasoit Hall.

Horace Pyle. Fish Warden, spoke on the propagation of bass, and of the work being done at the State hatcheries. Jarvis McCannon, State game warden for Chester county, gave an interesting talk on game conditions. Dr. Stanley H. Hackman showed a reel of motion pictures taken of his recent fishing trip into Canada.

ANNUAL FISH FRY AT TARENTUM

Upward of 100 men of Tarentum and a number of visitors attended the annual fish fry and monthly meeting of the Tarentum Sportsmen's Club held in the Malta Hall.

The first part of the meeting was given

(Turn to Next Page)

over to a discussion of club business. Included in this were the reports of the various committees of the club. Among the items discussed was a report on the planting of plots for feed and cover for small game with a special mixture of grain developed by the State Game Commission. A quantity of this mixture was on hand and was later distributed to the members to be planted this spring. A report was also given on propagation work in which it was stated that there had been distributed within the last few weeks game from the Game Commission and fish from the Fish Commission.

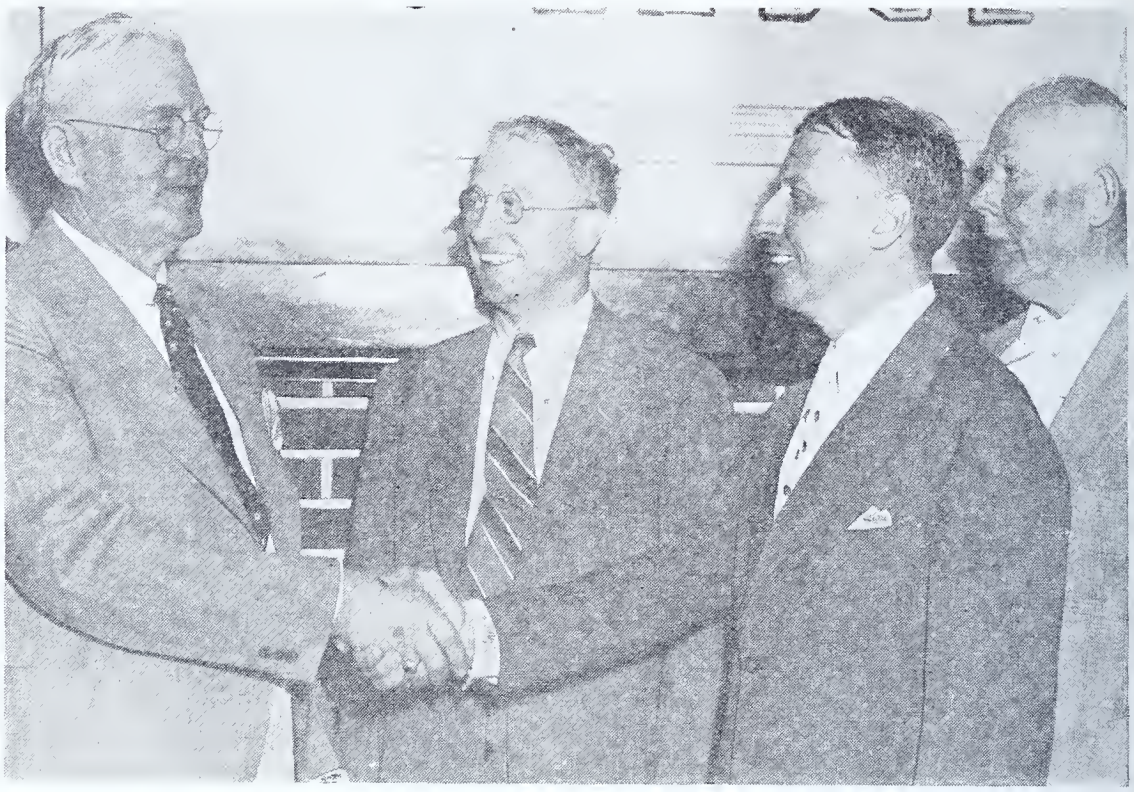
One of the members asking if the club was still paying bounty on certain kinds of hawks he was told that it was. Bounty is also being paid on crows, one dollar being paid for every 12 pairs of legs.

A special bounty will also be paid on crows after September 1 on certain crows which will be caught and tagged with bands.

A number of visitors, game and fish protectors and others were in attendance. Those who spoke were Roy Burns, Butler County game protector; Mr. Ellington, fish protector; Mr. Reed, Westmoreland County game protector; Clyde King, Apollo, member of the Armstrong Sportsmen's League and J. F. McKean, of New Kensington, member of the State Board of Fish Commissioners. Each spoke on the phase of fish or game work in which he was most interested.

A very generous serving of fish sandwiches with extras was served those who had bought tickets at the close of the business and speaking part of the meeting.

The meeting was concluded with the showing of several reels of moving pictures.



Courtesy New Kensington Dispatch

Sportsmen from New Kensington and other western Pennsylvania cities, nearly 200 strong, attended a birthday party honoring J. Fred McKean, popular member of the Fish Commission, from New Kensington. Extending best wishes to Commissioner McKean are Guy B. Saxton of Mt. Lebanon and Ed Hudson of Brownsville, members of the committee which arranged the affair.

SOME SORROWS OF THE ANGLER

(Continued from Page 5)

ried for distances by the wind. Their young are strange looking leech-like creatures, which cling to silken nets submerged in the swiftest parts of the stream. These young black flies are devoured in large numbers by the smaller brook trout and other fishy inhabitants of the streams.

The punkies, midges, or sand flies are the very smallest of the true insects that commonly attack the angler. It is said that a punkie "has to stand twice in the same place before one can see it." The chigger is smaller, as it takes sharp eyes to see one that is motionless: this is not an insect, however, but a mite or spider-like creature regarding which more will be said later.

Tradition has it that the Indians call the punkie by the appropriate name "no-see-um," but according to the Handbook of the North American Indians, the true Indian name is "ponk" meaning "living ashes," because of its hot bite. The word "punkie" is said to have originated with the Dutch of New York, and its resemblance to the Indian name is perhaps a mere coincidence. Well, by whatever name you call him the punkie can attract one's full and immediate attention whenever he arrives on the scene. He is the living negation of the old saying that "good things always come in small parcels." In fact, one is moved sincerely to thank kind Providence that he is only a microscopic edition of a carnivorous dinosaur. Where punkies appear in force, an immediate retreat in good order is highly advisable, but a retreat anyhow becomes imperative, as nothing seems to faze this insect, which is no more impeded by screens than is a fish by the water.

Punkies breed in a variety of situations but mainly in very moist sand or soil. Some species inhabit the foul water in tree holes, hollow stumps, moss, bark, dung, and even in the flowing sap of trees.

Although I have not heard that it has been tried, the modern lotion recommended for mosquitoes would probably repel these little torments.

On calm, warm days during May, June, and early July, some stretches of woodland streams teem with hordes of yellowish or dusky biting flies about the size of the house fly. Their wings are banded and their eyes are dappled with golden spots; hence the entomologist knows them as *Chrysops* or golden-eyed flies. But that is not the name the angler calls them when he is bitten in a dozen places. However, since his opprobrious epithet for this pest is absent from the printed vocabulary, and every angler knows it anyway, its omission will sweeten the page. In calmer moments the layman knows these hard-biting insects as dog flies, deer flies, or pine flies. The first two names doubtless have resulted from the observations of hunters, and if these flies were polite enough to confine their attacks to such animals, angling would be more likely to remain the "gentle art" and profanity would languish. The *Chrysops*, however, like the black flies, are not lacking some piscatorial virtue for their brugs are aquatic and in due season they furnish the trout with food in the form of plump, spindle-shaped larvae, frequently found in their stomachs.

Every country-bred boy knows the horse flies and how "you can't fool 'em," but only the angler knows what a pest some species can be. Especially pestiferous is a little gray species, common in the South Mountains of this State, which is known as the little horse fly which bites as hard but does not produce the warning buzz of the bigger ones.

* Examination of the article in the JOURNAL of ECONOMIC ENTOMOLOGY referred to by Mr. Walton, indicates the trade name of this fly-dope to be "Fly-Way" which is advertised in practically all sporting magazines at present.—Editor.

(To Be Continued)

PAID IN FULL

(Continued from Page 7)

air. As if by pre-arrangement, other line officers stepped out, a chorus of buglers joined in the din, and there was an audible sigh of relief all along the line.

Maddened American doughboys were on the charge; without regard to units they left the jungle lair and rushed out and up the hillside. Pent up anxiety and hate at last gave vent to action; after the first rumbling cheer few shouts were heard, few shots fired, the incline re-echoing only to the thud of many pounding feet and the laborious breathing of the attackers.

Sporadic Spanish rifle fire heightened into a roaring crescendo. Men fell in twos, threes, and fours, some struggled to their feet and tried to go on, often to fall again with the second bullet. No one stopped to succor the wounded; each one only wanted to feel that sharp sliver of steel at his rifle point slip into a white clad tormentor somewhere about the belt buckle.

Down went the standard bearer of a white militia outfit. Ere the colors touched the ground, a lanky bowlegged darky, no doubt a regular from one of the colored cavalry regiments, snatched up the staff and waved his fellows on. In another moment or so, the black man too sagged to his knees, coughing up the stream of life in a crimson torrent. Next a blond bare-headed kid, hardly out of his middle teens, grabbed the flag and rushed

Members of West Side Camp No. 231, U. S. Pa. at Larksville, assisting in stocking bass in Harvey's Lake, Luzerne County.

onward. As the burial detail came to him hours later, he still tightly clenched bits of the shattered staff in fingers forever numb.

Up and over the crest the avengers swept, bayonetting the futile resistance as it wavered and fled. Abreast of the surging weaving line ran our old time fisherman. Jumping across the shallow entrenchment, he found himself confronted with three or four white clad figures, desperate and lunging madly with the bayonet. Disposing of one and sorely beset by the remainder, our friend felt his time had come when suddenly a tall lean figure in the regular blue appeared at his side. Bayonets jabbed, thrust, parried and came away dripping—three or four white clad figures writhed or lay still on the ground. One a non-com discharged a service revolver full at the chest of the man in blue, and the regular sank to his knees, futilely striving to close the spouting flood with numbing fingers. Kneeling quickly, the Pennsylvanian tenderly stretched the dying lad on his back. Conscious and apparently numb to pain, the boy smiled, then his eyes clouded in a puzzling questing gaze. Again faintly smiling, dimming eyes brightening a bit with sudden recognition, he whispered: "Did you get him?" and slumped back limp and lifeless.

It was the little waif of the wooded hill and our friend always wondered until his last day whether the dying lad meant the Spanish officer or the big bass of the long ago. Somehow or other the Pennsylvanian liked to believe it was the bass; that the last living moment to one of Yankeeland's bravest was tempered and cheered by a pleasant memory of an October day back in the distant homeland he was never again to see.

On Fame's eternal camping ground,
His silent tent is spread,
And Honor guards with Glory round,
The bivouac of the dead!

West Side camp members, one of the most active units in the United Sportsmen of Pennsylvania, releasing bass in Harvey's Lake, Luzerne County.

FISH PREDATORS

(Continued from Page 9)

size for consumption, must be borne by the golden shiner. Obviously, an extreme abundance of shiners must be available if waters of this type are to continue to provide good fishing.

Methods of Control

During recent years, organized sportsmen in various sections of the state have been extremely active in conducting and sponsoring campaigns for watersnake control. While in some instances, the sportsmen themselves have staged highly successful snake hunts in which the .22 rifle figured prominently, many of the campaigns were in the form of contests for boys within specified age limits. Bounties were given for snake heads (or tails, as the case may be) and frequently, at the end of the contest, fine prizes were awarded to high scorers. Boys of school age generally spend a major portion of their time along accessible fishing waters during the summer months when watersnakes are most active and are therefore in an excellent position to aid in snake control.

Wire traps, with an opening at one end and slightly larger than standard size minnow traps, when submerged and baited with dead baitfish, have also lured many watersnakes to destruction. Perhaps the best time of the year to kill watersnakes is in late August when the adult females, just before bearing their young, have a tendency to become rather logey. At any rate, Pennsylvania in recent years has given increasing attention to control of this outstanding fish predator and results to date have been gratifying on many waters.

FISH ENTRIES FEW IN DAUPHIN CONTEST

Up to September 13 but two bass had been entered in the bass fishing contest being conducted by the Millersburg Hardware Co., and both these fish were caught the third week of the open season, in July. F. Park Campbell's 20-inch, 3 pound 11 ounce smallmouth, caught July 14, was topped three days later by Palmer G. Brown's 19⅞-inch, 4 pound and ½ ounce smallmouth.

No large fish have been caught by Millersburg anglers since, and few bass of any size have been reported. The Susquehanna has been in proper condition but several times since the opening of the bass season, July 1, and anglers, anticipating some real, early fall sport on the river were disappointed because of continued high and muddy water.

The bass fishing contest remains open to all anglers in Millersburg.

THOUGHTS AT A FISH FRY

(Continued from Page 11)

in bringing about this disastrous climax. Accusing fingers were pointed promiscuously in all directions and movements were undertaken to prove the guilt of some one factor that was responsible for this wholesale destruction.

Gradually the hysteria demanding prosecution of some responsible factor subsided and methods were proposed and tried in an effort to reestablish, to some degree, the splendid fishing conditions that were enjoyed by past generations.

Fish hatcheries were put in operation and thousands upon thousands of fish were dumped into the remaining clear streams to quiet the impatient cries for more fish and more fishing. Still something was lacking, the program seemed incomplete. Restocking acted more like a shot in the arm than a step toward a permanent cure.

A brilliant flash of gold passed close to my face and assumed the pert figure of a prothonotary warbler as it perched on a nearby twig. My thoughts were diverted once more to the present by this bit of unexpected action. Vaguely, I began to grope for a solution to Pennsylvania's fishing problem by comparing her known conditions to those known conditions of the strange seemingly unlimited productivity of this lake.

Obviously the essential element upon which the fish Utopia was dependent was PURE water. Mother Nature had provided this necessity in abundance and fortunately man had had no cause (fancied or factual) to contaminate this area.

Many times on trips into the deeper, more remote parts of this great swamp we have plunged our canteens to arms length beneath the surface and drank the cool dark water without the slightest fear of contamination of any kind.

Where water of this degree of purity can be found the microscopic form of water life thrives and it is upon this microscopic life the tiny fish depend. These tiny fish, the minnows and fry of larger species, serve to a great extent as food for the larger fish. The fry and others of this small fish group must, if they are to perpetuate their kind, be provided with an abundance of cover in which to elude their constant enemies, and here vegetable growth plays an important part. In addition to providing a myriad of retreats for the smaller fish this vegetable growth supports a vast insect life which in turn serves as additional fish food and too, these aquatic plants provide a system of aeration so necessary to sluggish waters.

The exceptional abundance of aquatic plant life in the swamp is undoubtedly an immensely important factor in the development and maintenance of its fish population. Still nature in addition to providing avenues of escape for the fish over and above some predetermined number, has provided hordes of natural enemies to help hold these fish in check.

Countless thousands of birds prey on the aquatic life of the swamp. They range from eagles and ospreys to the widely diversified species of wading birds. Many kinds of water snakes thrive there in such numbers as would probably bring an attack of apoplexy to some of our Pennsylvania fishermen. Great numbers of fish eating turtles abound in the lakes and larger pools. The two species of turtle most unique in the eyes of our northern fishermen are the soft-shell or leather-back and the alligator turtle, both of which grow to enormous size. Alligators are returning to their place in the scheme of the swamp after their numbers were sadly depleted by 'gator hunters. Otters, too, are on the increase due to the protection they are receiving under the Federal Refuge restrictions on hunting and trapping.

Despite the terrific depredations so frequently attributed to these fish-eaters the fish continue to thrive and spread their kind thru the inlets and outlets of the swamp accessible to fishermen. Despite the wholesale removal of fish by fishermen they continue to be replaced by the endless advance of finny legions.

Here was a perfect working example of a principle which this state might do well to adopt if its restocking program is to ever provide the state with a maximum return.

It is a principle with which I was familiar, the result of its having been proposed by others, but never before had I chanced to witness that principle in action—working—producing. Here it was—no questionable theory awaiting to be proven but an ideal feeding ground providing a perpetual supply of fish for all adjoining waters.

This same principle can be applied to our Pennsylvania waters by the establishment of closed sections of streams and lakes, in which no fishing is permitted, and wherein every effort is made to develop the natural aquatic plant growth to a maximum. This plant growth will serve, in our streams and lakes, in the same capacity, tho not to the same degree, as did the plant growth in the swamp.

From these highly developed areas the aquatic plants will spread their seeds and thereby scatter additional production areas thruout the stream or lake. A series of these feeding areas distributed at intervals along all streams whose waters are free of pollution would, I believe, prove to be a more practical approach to the solution of our complex fishing problem than the increased artificial propagation of fish and fish food which in the majority of cases are doomed to a short life span by the present lack of essential natural conditions.

The establishment of these areas would prove to be no small job and it would entail the investment of considerable time and money. This plan, if properly fostered, should gain the active cooperation of sportsmen thruout the state and thereby distribute the burden of the task to many shoulders. It would require the expansion of the program now providing some of our streams with small dams and deflectors or the developments of a new program to accomplish the same objective. Many additional details would require attention but surely the ultimate return of the best fishing possible to our remaining clear streams would prove worthy of this investment of time, trouble and capital. The accompanying flood control effect would, in itself, warrant these expenditures.

Perhaps it is but a wild dream to picture the shallows of our streams as a green profusion of aquatic plant life—protected from floods by deflectors and droughts by dams—to vision streams capable of maintaining greater quantities of fish thru its abundance of natural foods and ample shelter.

Surely it is a more desirable future to anticipate than the continuous restocking of fish life in barren streams whose uncertain water levels provide additional hazards to the ever hazardous career of a fish and wherein a MINIMUM of reproduction, under natural conditions, is GUARANTEED.

TALL ONE, AND HOW!

A "Liar's Throne" has been established by the Shippensburg Fish and Game Association. The right to sit in the seat of honor at each meeting of the association will be given to the member who concocts the best fish-y story. At the close of the fishing season, the throne will become the property of the grand champion Annanias.

Winner of the first opportunity to sit on the throne was Herman Gruver with this story:

"A friend of mine went out to shoot fish with a muzzle-loading rifle about twenty years ago. He ran out of bullets so he pulled some nails from his pocket and shot at the fish with them. Well, he had forgotten all about that experience until a few days ago when he was out fishing at the same spot, this time with hook and line. He got a bite, but couldn't pull in his fish. He waded out into the creek to see what was the matter only to find that he had caught a catfish nailed fast to the large root of a tree by a nail he had shot 20 years ago."

FINE BASS TAKEN IN SCHUYLKILL

The following large bass are among the scores taken in Schuylkill County waters since the season started on July 1:

Lincoln Machmer, of Pine Grove, has taken two twenty-inch bass in Sweet Arrow Lake, each weighing between 4½ and 5 pounds. Ralph Neidlinger, of Swatara Valley has to date taken nine bass in Sweet Arrow Lake with the largest one weighing 5½ pounds and being 21½ inches long. Harry Good took a smallmouth bass in Deer Lake weighing 4½ pounds. The bass was 19½ inches long and that is quite a bass for a smallmouth.

Warden Lech reports that scores of bass between 9 and 11 inches are taken in Sweet Arrow Lake and Miller's Pond at Schuylkill Haven. The bass in Miller's Pond originated from stockings made from fish seined out of dried up ponds in low water periods of other years.

Most of the bass taken are hooked on night crawler lures. Hundreds of crappie bass are in the catches being made daily. Sweet Arrow Lake is full of small bass under the legal size which argues well for future fishing. The warden also reports the bass anglers as a well behaved lot with no fish code violations discovered to date. The bass anglers seldom encounter trespass troubles and experience little land owner bothers since they fish almost exclusively in known public waters.

Whales are close relatives of elephants, according to some authorities who have noted a resemblance between bristles—vestiges of ancestral fur—on some species of the aquatic animals that indicate kinship with the pachyderms.

Question: Am thinking of trying fishing for muskies in November. What waters would you suggest here in the state as being good bets? How is November as a muskie month? —J. S.

Answer: November ranks as one of the very best months of the year for taking this giant game fish. Trolling with a good sized sucker, 10 inches or better, either sewed to the hook behind a swivel or alive, is an excellent method in muskie fishing. Plug fishing also may produce some strikes but in trolling a good idea is to keep the boat in slow motion just off the weed beds, according to Warden Bill Briggs, an expert Erie County muskie fisherman. Waters well worth your giving a try include Lake Le Boeuf at Waterford, Erie County, and Edinboro Lake at Edinboro, Erie County.

Question: While woodcock hunting on the headwaters of a brook trout stream in the central part of the state on opening day of the woodcock season, October 16, I observed quite a few large brook trout on the spawning beds. They were the most beautifully colored fish I ever saw. Wasn't this pretty early for spawning?—M. F.

Answer: Not necessarily. The brookies may spawn at any time from October 1 to the latter part of November, apparently depending somewhat upon the early or late setting in of autumn. Years ago, before the cutting of the timber, trout streams generally carried a fairly constant temperature during the year so that the charr or brook trout could be said to spawn on an even temperature of the water. Today, however, with drastic temperature variations the general rule, the brook trout is regarded as a fish that spawns with falling water temperatures.

Question: Have occasionally noted references to fish eggs as "adhesive" and "non-adhesive." What is meant by these terms and what are some of the fish that deposit these types of eggs?—J. L.

Answer: In referring to adhesive eggs, fish culturists mean the eggs of fresh water fishes which, when deposited, cling to the bed of the nest. Non-adhesive eggs are those that lie loosely in the spawning bed. The smallmouth and largemouth bass, as well as the bluegill sunfish, are spawners of adhesive eggs. Successful artificial extrusion of eggs from bass has never been found practical at hatcheries of the Fish Commission, and for that reason the fish are permitted to spawn naturally in ponds at the hatcheries. Brook trout, brown trout, rainbow trout and suckers deposit non-adhesive eggs, as does the walleyed pike, and these eggs are successfully stripped from ripe females at the hatcheries when spawning time comes. After the trout eggs have been impregnated with milt from the male fish, they are placed on hatching trays in troughs at the hatcheries with a constant flow of water passing over them during the period of incubation. Eggs of the wall-eyed pike and sucker are hatched successfully in hatching jars.

Question: I understand that a run of eels occurs each fall in Pennsylvania waters. When does this usually occur and where do they spawn?—K. D. Y.

Answer: Old time eel wall fishermen often used the term "the run starts when the leaves are heavy on the water," usually in October. It is believed that only one out of about 10 eels, all females in our waters, feels the spawning urge. When a raise in a stream occurs, these fish seem to roll with the current and it is at such times that heavy catches are made in the V-shaped walls with their wooden racks. Spawning ground for the eel is believed to be in the Saragasso Sea and the adults die after spawning. It is also thought possible that the sexual organs of the eels develop after entering salt water on the spawning migration, perhaps brought on by the change from fresh to salt water.

LAUREL RUN DAM PROJECT STARTED

A dam project that will be a boon to Somerset County fish and fishermen was begun September 22 on Laurel Run, just below the widely acclaimed scenic Laurel Falls.

Although only a mere handful of members of the Meyersdale Sportsmen's Association turned out to tackle the construction job, work progressed steadily and the site is almost ready for the building of a log, stone and earth breastwork.

The dam site, ideally located below the pictorial falls, is a wide V-shaped crevasse ten feet deep and covering an area of nearly 2,800 square feet. Years ago, at the height of lumber operations in this section, a water driven sawmill was situated in the little basin, and, although partly destroyed by fire, many of the huge timbers that comprised the framework of the mill still remain.

An ironic note is struck as these same logs that played an important part in ravaging the virgin forests are used to conserve wildlife and help restore the land to its primitive state.

The main purpose of the dam is to afford protection for trout from the wily coon and other animals whose diet includes fish. It will also provide a haven for fingerling trout whose chances are slim in open waters containing cannibalistic members of the trout family.

Reckon November is jest erbout ez gude a munth fer the feller who likes ter fish an' hunt ez there is on the calandar. These here frosty mornins the pike is hittin' like the dickens an' ef a feller goes down ter the big river he kin ginerally git sum fun with the salmon. Along with huntin' squrrels an' turkey, semes like the days jest ain't long enuf ter git in all the sport a feller ud like ter.

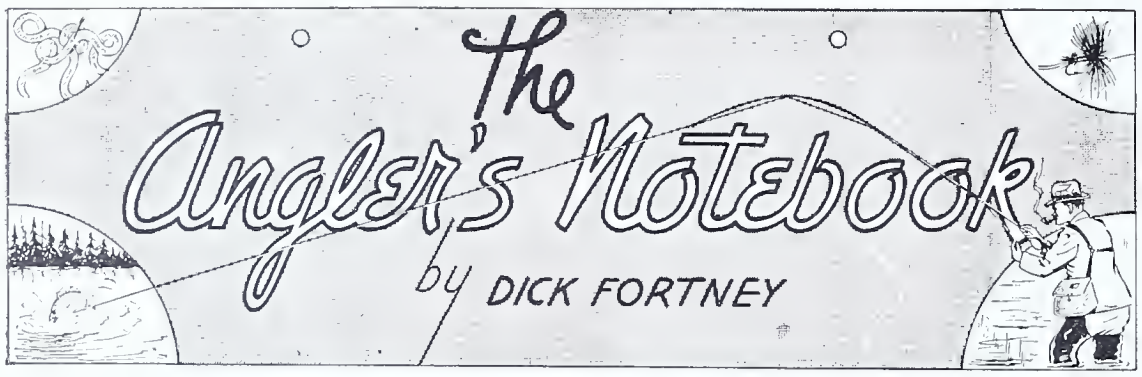
I got me a duck stamp last yere an' ez the boys hed bin sayin' thet they wuz a gude bunch o' black ducks down ter the big river, Joe Perkins 'n' me decided ter try our luck fer ducks. Joe figgers mebbe it mite be a gude idear ter taik along our tackle jest in case them ducks wuzn't flyin' too gude, so we traipses down the line with our trollin' rigs an' guns.

Rite early in the mornin' it wuz purty blustery an' we kilt six mitey purty black ducks by eround 10 o'clock. Then we rigged up the castin' rods with them june bug spinners an' nite crawlers an' started ter row with the boat over sum mitey deep an' gude lookin' salmon water. Unnerstan' you calls them fish walleye pike but we bin acallin' them salmon fer so fur back thet it jest semes eround this neck o' the woods thet's the rite name fer 'em.

Ennyhow, Joe he wuz atrollin' and I wuz arowin' eround in a circle slowlike when Joe he sez, Jerry, by gorry, I reckon I'm fast ter the bottom. Well, by heck, the bottom starts ter move an' boy whut a fish thet wuz. Joe he fot thet salmon fer nigh onter 20 minits afore he brot it alongside the boat, an' it shure wuz a honey. It hit 30 inches long an' when we wayed it when we got home it wuz jest shy o' 8 pounds. We ketched 4 uther salmon thet mornin' every one better than 16 inches long an' 2 o' 'em 22 inches long.

Jest ter maik the day rite we got home erbout 2 o'clock thet day an' it wuz sech a nice still evenin' thet I heded fer the hickory knob on the ridge ter try fer squrrels. Kilt 3 dandy grays ez fat ez butter by nitefall. Ef squrrels, ducks, an' salmon don't maik a rite day for a feller thet likes the outdoors. I don't know what kin.

List among the big trout taken on opening day of the present season a fine 22 inch rainbow creeled by Ralph Cressman of Allentown in the famous Little Lehigh.



It was dark, pitch dark, when Millard Moore of Williamsport, parked his car along a dirt highway, strung up his rod in the glow of his headlights, and then walked softly across a meadow to the edge of Lycoming Creek. He had waited for this moment—this dark, sticky summer night—for weeks to match his wits against the cunning of a monster brown trout he had spotted in this particular hole weeks before.

Business and other matters had kept him off the stream for a couple of weeks, but this was the night.

Out into the blackness he sent a large, white fly that had produced many fine trout at night. No response! Again and yet again, he cast, and he couldn't understand why the tackle felt strange.

For half an hour he worked and then, a bit nettled and concluding that the trout was not going to rise anyway, he turned his flashlight into the void in front of him.

The "hole" was almost dry! The weeks he had been kept off the stream had been dry ones, and the little pool where his much wanted trout had made its home had disappeared—and with it the fish.

Millard went home fishless that night.

Which drives home the point that there's a lot more to fishing than just whipping a fly through the air or dropping bait into a quiet pool. We would like to turn from angling lore for this one month and go deeper into the subject. You have had personal experiences of your own worth telling; so you should have a keener pleasure in the reading of the anecdotes that follow—little stories that will reveal why the Central Pennsylvania anglers who are involved in them get extra thrills out of angling—even as you and I do.

Howard Weaver is a chap who dearly loves to sit along the bank of a creek, on some soft-topped rock, waiting for a trout to begin feeding before getting his rod into action.

And he concentrates on his observations.

He was stationed along Loyalsock Creek one late afternoon, waiting for the tell-tale signs of a feeding fish, when a mighty splash caught his attention. Quickly, yet quietly, he stepped out into the water. Then he promptly returned to shore—without a single cast. He forgot that he had rolled down his boots while sitting on the rock making his "observations."

A feminine angler at the Fishermen's Paradise one afternoon this season asked C. Robert Snyder, a special warden, to tell her why, despite careful casting, she could not get her dry fly down on the water.

"Is it the wind?" she asked. "Or is my line too light."

Snyder took a look around. "It's a bug, madam," he explained with a grin. Then he pointed into the air above her head to a huge dragon fly which had seized the trout fly and was swooping around with it. The dragon fly was big enough that it could resist the whip of the light rod the anglerette was using.

Anglers on Muncy Creek one Sunday afternoon looked with amazement into a pool where a large brown trout was swimming around with a big squirming watersnake held tightly in its jaws.

The writer and a friend, fishing in Wyalusing Creek one afternoon, were forced to do a hasty climbing act over a wire fence to escape the attention of a large white bull. The farmer who owns the land observed our hurried retreat and chuckled heartily.

"Is that bull really mean?" we asked.

"You bet," our friendly farmer replied. "But don't be scared of him. If he really gets after you, just stone the devil out of him. That's what I do."

The late J. August Beck, of Williamsport, who was known to sportsmen throughout Pennsylvania, had a rather chilling experience one hot noon on Loyalsock Creek. It was his custom to carry a large creel, one side of which was for fish and the other side reserved for his lunch.

Mr. Beck placed his basket along the creek bank and walked into the woods nearby for a drink of water from a spring.

He returned to his basket, made himself comfortable, and reached inside for a sandwich.

His hand touched something cold and squirming, and he drew it out of the basket in a hurry. It was only a watersnake that had crawled in among the sandwiches, but it gave him a real scare.

Jean S. Huling, of Williamsport, loves to fish with deer hair bass bugs—and his regular starting time is that exact hour when the bats begin swooping over the stream and the whippoorwills sing.

One evening on Lycoming Creek Jean had several vigorous strikes at his bass bug, but he missed connections of all of them. Came another violent splash, and this time he sank the hook—into a large and very angry bat.

Jean got rid of his visitor with a sharp switch of his rod.

John L. Young, fishing with helgramites for bass in Loyalsock Creek one July afternoon, failed to get a nibble and then observed that fish were rising to the surface and feeding at the edge of a riffle just within casting distance.

He hadn't a fly in his pockets, and his car was parked a full mile distant—so he flipped a helgramite through the air, allowed it to touch the water lightly, and then whipped it back into the air. On the third cast he hooked a ten inch brown trout.

Another story from the Paradise. A fisherman using dry flies hooked a small trout, and as he was reeling in the fish, intending to release it, another trout grabbed it. The angler, seeing the second trout about to strike, tried in vain to jerk the small fish out of its reach.

For ten minutes, while spectators watched in amazement, the fisherman struggled with his double catch.

Then came the strangest thing of all. He landed a brown trout 22 inches long—and his fly was firmly imbedded in the jaw of the big fish, which still held between its jaws the small trout which had originally taken the lure.

Two friends and the writer were fishing one evening last summer on Lycoming Creek. It was pitch dark when we met again at the car, and as Jean Huling and I came along the creek bank toward our meeting place, the third member of the party, Howard Weaver, hailed us.

"Be careful of a length of wire lying right close to the path," he warned. "Don't trip over it in the dark."

We could hear his boot cleats on the rocks. "It's right about——"

Then there was a mighty splash.

Mr. Weaver had stumbled over the very wire of which he was warning us and had gone flat on his stomach into the water. Fortunately, it was deep enough that he was not injured.

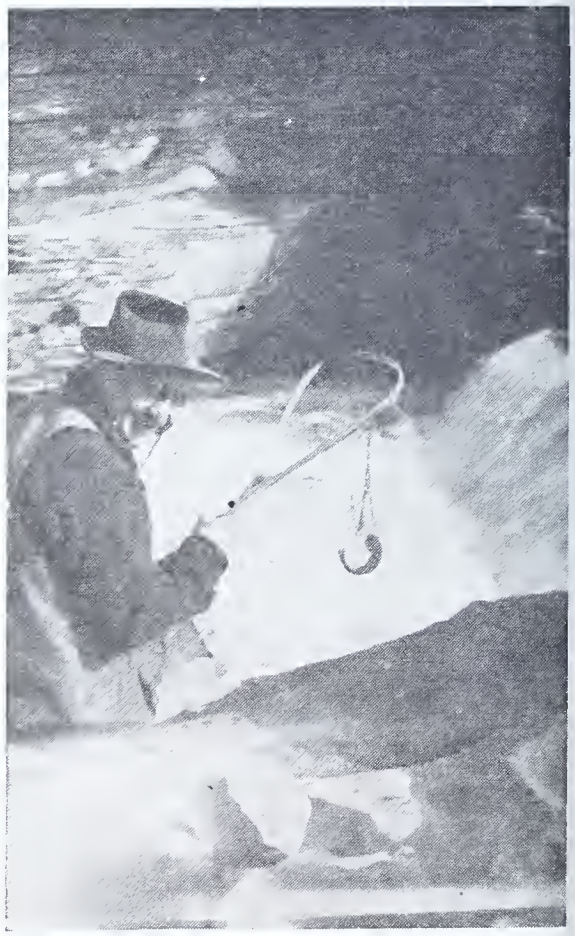
And that reminds us, finally, of another Good Samaritan act in which Brooks Garland and the writer were the actors.

The scene was Wyalusing Creek a hot summer evening, and Brooks and I were strolling through a cow pasture on our way to a favorite spot for "bugging." My arms were pretty well filled, with boots and rod and a fishing jacket, so when we came to a fence Brooks stepped ahead.

"I'll hold down the wire for you," he offered, suiting the action to the words.

Then he straightened up with a snort of surprise.

It was one of those darned electric fences!



Richard Luzenski of Nanticoke landing a nice trout.

CONTESTS FEATURE WALTONIAN MEET

Contests in target shooting, bait casting, fly casting, surf casting and pistol matches featured the annual field day program sponsored by the Izaak Walton League of Berks County at the Cedar Top Gun Club.

Three marksmen tied for top honors when they shattered 49 of their 50 16-yard clay birds. In the shootoff, Morris D. Leitzel, of Reading, broke 25 straight to win the event from Roy Hemmig, of Reading, and Charles Oberholtzer, of Geigertown.

Summaries of the target shoots follow:

First Class—Morris Leitzel, 49; Charles Oberholtzer, 49; Roy Hemmig, 49; George Fairchild, 48; William R. Hoshower, 48; Howard Ernst, 48; Edward Eisenbise, 47; James Wertz, 47; Frank Thompson, 47; Morris Kern, 46; L. E. Lesniewski, 46; J. Webb Muhlenberg, 46; Frank Louser, 45; Ray Behney, 45; Claude Dietrich, 45.

Second Class—George Swoyer, 44; Mahlon F. LaRue, 44; Albert Mittower, 44; Irvin Sheeler, 44; Walter Irwin, 43; Willard Ziegler, 43; George Schlegel, 43; Irvin Manwiller, 43; Charles Schell, 43; Caleb Killian, 43; Ray Mountz, 43; Charles Quaintance, 42; George Weaver, 42; S. P. Zellers, 42; Miles Oxenreider, 42; Herbert Segars, 42.

Third Class—Paul Grim, 41; John G. Nuebling, 40; George Shupp, 39; Bert Hinkle, 37; Charles Davis, 36; Daniel Swavely, 36; Mrs. George Fairchild, 35; Jack Muhlenberg, 32; John France, 30; M. J. Peiffer, 26; Irvin S. Schlenker, 24.

Pistol Matches—Class A, .22 cal., Merton J. Golden, 98 out of 100; second, Henry Mertz; class A, .38 cal., Merton J. Golden, 98 out of 100, with Sam Wishnieskie, second; class B, .22 cal., Arthur Heffner, Kutztown, 83 out of 100; class B, .38 cal., Joseph Sanna, 83 out of 100.

Berkshire Trophy Shoot—Won by George Fairchild, 48 out of 50; second, Jack Muhlenberg.

Running Bear Shoot—Won by J. Reitz, Cedar Top, 24 out of 25; second, C. Miller.

Bait Casting for Accuracy—Won by Edward Adamcyk, 86 points; John Rothermel, 84; Paul Hertzog, 81; Harvey Adams, 73; Vernon Coller, 69; Harry Cook, 68; W. G. Irwin, 53.

Open Bait Casting for Accuracy—Won by John Rothermel, 91; John W. Hoffman, 87; Paul Hertzog, 86; Louis Schera, 85; Charles Parker, 85; Edward Adamcyk, 76; Harvey Adams, 75; Erle Homan, 74; Vernon Coller, 65; H. Ernst, 61.

Bait Casting for Distance—Won by Harvey Adams, 140 feet; Paul Hertzog, 134; John Rothermel, 119; Norman Shappell, 105.

Open Bait Casting for Distance—Won by Erle Homan, 134 feet; Harvey Adams, 132; John Rothermel, 129; Paul Hertzog, 90.

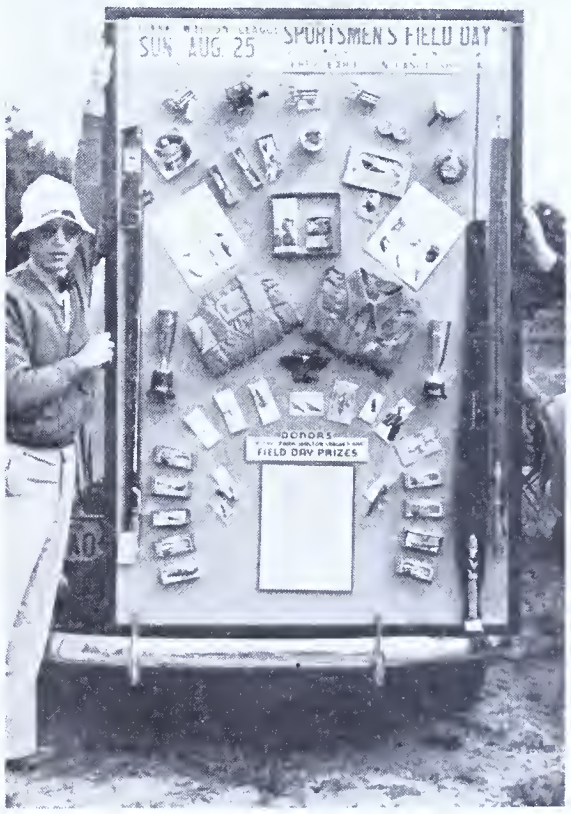
Fly Casting for Accuracy—Won by Charles Parker, 96 points; John Rothermel, 92; Paul Hertzog, 91; Byron Mortimer, 78.

Fly Casting for Distance—Won by Charles Parker, 69 feet; Phil G. Platt, 65; T. Stauffer, 62; Paul Hertzog, 61; John Rothermel, 59; M. Sprolles, 36.

Surf Casting—Won by Clarence Bright, 238 feet; B. B. Lord, 139; Paul Hertzog, 136.

Skish Competition—Won by John Rothermel, 41 points; Harvey Adams, 33; Harry Cook, 31; Louis Schera, 28; Paul Hertzog, 26; Edward Adamcyk, 22; Erle Homan, 17.

A group of Waltonians who helped direct the activities for Berks County Chapter, Izaak Walton League of America, Eighth Annual Field Day. Left to right, standing, Alfred A. Ramm, Jr., John D. Rothermel, Levin D. Schearer, Harvey Adams, Albert Green. Front row: Harry Fritz, Harold Marbarger, John P. Deck, Oscar A. Becker, Ralph Walley and Vernon L. Hassler.



Prizes for bait and fly casting events awarded at the Berks County Chapter, Izaak Walton League Sportsmen's Field Day.

Paul Hertzog, an active member of Berks County Chapter, fly casting for accuracy at the eighth Waltonian field day.

TROUT STOCKED FROM CLUB PONDS

More than twenty-five fishermen assembled recently at the rearing pools of Coatesville Anglers' Association, located along Brandywine Manor Road, and assisted in distributing the fish in the pools for restocking purposes in Chester, Lancaster and Delaware counties.

The brown and rainbow trout had matured from fingerlings sent to the association almost a year ago from state and federal hatcheries. Some of the trout measured ten inches. The rest were legal size and slightly under that. The trout were dipped from the pools in cans of the anglers.

William Peoples, president of the club, had previously issued a general call for mobilization of all fishermen in Coatesville and vicinity to report to the rearing pools.

Among the well-known fishermen who assisted were Ezra Morrison, Constable Harry Parmer, Lester Morrison, William Gay, William Peoples, Jr., Norman McWilliams, W. Miller, Benjamin Elliott, Norman Donoghue, W. M. Lloyd, L. C. Gay, William Miles, Warren Entrekin, Henry Bickel, C. Lynch, W. Anderson, J. J. Trout, E. S. Coffroad, Charles Hall, Clarence Miles and Norman M. Wood. Fish Warden Horace Pyle was also on hand.

MIDDLE ATLANTIC ASSOCIATION OF CASTING CLUBS

An association of sportsmen's clubs formed to promote tournament casting, encourage organization among anglers assist in conservation; and support all moves toward true sportsmanship.

Delaware County Field and Stream Association

October 6th was a "Red Letter" day for this Association, when it held its Second Annual Field Day on its club site.

Trap Shooting was one of the most active events and kept two traps busy from morning until evening. Frank Wall won this event with a score of 49 out of a possible. A. J. McDowell placed second; while third place was captured by Barney Berlinger, former University of Pennsylvania Decathalon champion and winner for three successive years of the Plug Distance event in the MIDDLE ATLANTIC ASSOCIATION OF CASTING CLUBS Tournament. Despite a strong cross wind, Barney also won the Plug Distance event at the Delaware County Field Day, with a long single cast of 238 feet and an average cast for the day of 224 feet. Joe Hirsch placed second in this event, with a long cast of 227 feet and an average cast of 218 feet.

Top place in the Plug Accuracy event went to George DeGorgue, who competed against some of the foremost casters in the Eastern part of the State and who scored a 94 out of a possible 100, also despite a strong cross wind. Bill Dur finished second with a 91, while 13-year-old Donald Ott of Mantua, N. J., captured third place with a score of 90. Fourth place went to H. Lavin.

Les Downs placed first in Rifle Shooting, while Letty Sibley was a close second and C. Green, R. Roedder and E. Wadling came next. In Pistol Shooting, which was another popular event of the day, J. Van Valkenburg finished first with a score of 95 out of a possible 100, Joe Landwehr placed second with a 93, Federal Game Protector Carl Lourpe placed third with a 92 and Carl Hammill, fourth with a 90.

Fred Boerner was the most accurate fly caster of the day, N. Tobias was second, George DeGorgue third, and T. Bonsall, fourth.

For the second consecutive year, Fred Clauser, won the Surf Casting honors, while Barney Berlinger again displayed his unusually versatile sportsmanship ability by placing second in this event.

Not only were there events for men, but for women as well—honors going to Mrs. M. Adams and E. Yetter in Archery for women. In the men's Archery event, Bill Reid won one contest and B. Thigpen won the second.

Gloucester County Game and Fish Association

When thirteen year old Donald Ott, son of Lorin Ott of this club, took part in the recent Delaware County Field and Stream Association Outing, he won the applause of the group that watched his excellent plug casting in the Plug Accuracy event. On this occasion, Donald placed third among a large field of adult contestants.

Donald and his father also won prizes recently in the Annual Tournament of the Dover Fishing Club of Philadelphia.

Holmesburg Fish and Game Protective Association

Rods whirred and reels sang at the recent Outing of this Club, held at Pennypack Street and Delaware River, when members, friends and guests provided keen competition for each other in three major casting events.

In the ⅝ ounce Plug Accuracy event, the winners were: first, Arthur Clark of Philadelphia, whose score was 97; second, Milton W. MacBain, also of Philadelphia, who scored 94; and George DeGorgue of Upper Darby, whose score totalled 93. Harry Lightfoot of Philadelphia won the ⅝ ounce Plug Novelty event; while Arthur Clark placed second and W. Beohner, third.

In the Surf Average event, in which special tournament equipment was not permitted, Walter Wilson of Philadelphia was top man, with Art Springman and Thomas Watson, both of Philadelphia, taking second and third places respectively.

Two casters from this club placed in the Annual Tournament of the Dover Fishing Club of Philadelphia—William Dur won third place in the ⅜ ounce Plug Accuracy event as well as prizes in the ⅝ ounce Plug Accuracy and in the Plug Distance events; and William Enochs placed fourth in the ⅝ ounce Plug Accuracy and won prizes in the ⅜ ounce Plug Accuracy and in the Plug Novelty event.

Lansdale Sportsmen's Club

The Lansdale Sportsmen's Club wishes to express appreciation for the young fish which were placed in the Blue Spring Dam near Lansdale by the Bucks-Montgomery County Fish Warden Harry Z. Cole. These fish were of this year's hatch from two of the MONTGOMERY COUNTY FEDERATION OF SPORTSMEN'S CLUB propagating ponds located on the Beidler Farm at Abrams, Pa. William Stoneback, President of this Club and of the Federation, remarked that the fish hatched and raised this year in all of the Federation's propagating pounds were larger and in better condition when transplanted. This improvement were largely due to the food which was purchased by the Federation and placed in this pond this year.

Repairs have been completed on the Blue Spring Dam, through the efforts of Harry Cole and under a project sponsored by the N. Y. A.

Lower Merion Rod and Gun Club

The Ridgway Farm at Bethayres was again the meeting place and the greeting place of approximately two hundred men, women and children who enjoyed there another Annual Fall Picnic and Outing of the Lower Merion Rod and Gun Club.

There are those who suspect that some

Left: William Ridgway of Bethayres, on whose farm the Lower Merion Rod and Gun Club held its fall outing; Right: George A. Purring of Narberth, president of the Club, as they participated in the recent outing.

years ago—in 1933, to be exact, when this Club held its first outing at Bethayres—it wisely bestowed honorary membership on the Weather Man; and the Weather Man, so far, seems to have keenly appreciated this act. For, to quote the President of the Club, George Purring of Narberth:

"It may rain everywhere else, but it never rains at Bethayres during our picnics!"

Surely enough, although there was a shower in the evening of this occasion, bright skies and golden sunshine prevailed until the day's activities had ended and the picnickers, contentedly watching Mrs. Joseph P. White and Mrs. William Kaiser, both of Narberth, clear away empty boxes, pans, pails, barrels and dishes, had decided it was time to commence their homeward trek.

Mrs. White, with her usual care and diligence, provided a delicious picnic menu composed of a variety of foods which succeeded in pleasing everyone present. Mrs. J. Wallace Goodwin of Ardmore, and Mrs. Ernest Jenkins, of Narberth, presided over the games for the ladies; while several of the men kept the male participants busily engaged in casting and in shooting contests.

When "Skish"—a form of Plug Casting now being advocated by a number of sporting goods houses—was introduced during the afternoon, Clarence Burnside of Paoli, was the winner and Ernest Jenkins of Narberth, took second place. Joseph Boyle, of Drexel Hill, was the best shot of the afternoon with a revolver; G. Sherman Williams, of Roxboro placed second in this event. Edward N. Merkle of Narberth, made the highest score among the rifle shooters, with J. Wallace Goodwin of Ardmore, placing second. In the Plug Casting for Distance event, Ernest Jenkins was the winner, while Mrs. Ellen A. Dietrich of Upper Darby took second place.

Monocacy Field and Stream Association

Believing that stocking of trout in the Fall will give fish so stocked an opportunity to grow and otherwise become accustomed to their new habitat—all other conditions being

equal—during the winter and spring months, this club placed a number of trout in adjacent streams during those sunny fall days just past.

Plans for live bird shoots, etc., in preparation for the 1940 hunting were outlined at a pre-hunting season meeting designated as "Farmer's Night," when members of the Association and farmers who were guests of the Association assembled to hear addresses by prominent sportsmen. Charles Neff, of the Lehigh County Federation of Sportsmen's Clubs, spoke on the "Aquatic Life in the Monocacy Creek" and reported on his recent survey of the upper section of this Creek. William A. Moyer, Lehigh County Game Protector, urged those present to strive to maintain *"Courtesy and Cooperation between the Sportsman and the Farmer,"* thus holding *"the farmer as the hunter's best friend."* R. A. Rossiter, Assistant Land Acquisition Agent of the Pennsylvania Game Commission, related to the meeting some of his interesting experiences encountered while purchasing land for the State; while Morris A. Steward, Northampton County Game Protector, outlined hunting regulations and precautions to *insure safe hunting;* and Robert Scheetz supplemented Mr. Neff's talk on the relationship between the farmer and the sportsmen.

Montgomery County Fish, Game and Forestry Association

The quarterly meeting of this club was recently held in the office of Adolph Muller, on the DeKalb Street Pike near the Germantown Pike in Norristown.

At this meeting it was learned that this club furnished the truck and cans which were used to transfer 92,000 small fish from propagating ponds of the MONTGOMERY COUNTY FEDERATION OF SPORTSMEN'S CLUBS to the Skippack and to other fishing waters in Montgomery County. The Bucks-Montgomery Counties Fish Warden, Harry Z. Cole, who is a member of the club, reported that approximately 26,000 fingerlings had been so removed from the Hankins Pond at Collegeville; while approximately 16,000 were taken from the two Beidler ponds at Abrams and approximately 50,000 from the Frend Pond near Collegeville.

Pennsylvania State Fish and Game Protective Association

Approximately 350 sportsmen took part in the Fall Outing of this Association, held in Bucks County, at Chain Bridge on the Neshaminy Creek. Vice-President Bill Burk again won the appreciation of the club when he provided, without cost to the club, the food for this outing. As in past years, Bill donated dozens of hot baked hams, bacon, eggs, sausage, frankfurters, bread, rolls and coffee for all who attended.

Trap Shooting honors of the day went to Byard Brogan in Class A, and to Dove and Reese in Classes B and C, respectively. In Trap Shooting, too, Ed Bullock established a new record for the Association when he did not miss a single bluerock in a string of fifty.

Archery seemed to be the event which attracted the largest number of entrants. Among the 150 who tried their skill in this contest, Barney Berlinger's score was outstanding.

While fishing in the Neshaminy, Fred Kremer caught the largest smallmouth bass that day.

Father and son—they fish together and cast together. Lorin Ott of the Gloucester County Game and Fish Association, with his 13-year old son, Donald. Donald, who placed 5th in the plug accuracy event of the 1940 M.A.A.C.C. Tournament, placed 3d in the same event at the recent Delaware County Field and Stream Association outing.

Winners of other events at this outing were as follows: *Quoits*—Walter Krous and W. A. Dill; *Water Boiling*—L. A. Bonsal; *Bottle Fishing*—Hiram Reinhart; *Darts*—Raymond Buseman; *Plug Accuracy*—George DeGorgue; *Fly Accuracy*—Ed Weigman; *Fly Distance*—Ray Neirle; and *Plug Distance*—Barney Berlinger, who, although using a level wind regulation fishing reel and a 15-pound test fishing line, made a record cast for such equipment of 249 feet.

Perkiomen Valley Sportsmen's Association

Ed Kehs, of Schwenksville, Abe Landis, of Rahns, and Frank Clamer, of Collegeville, were among the members of this club who assisted Fish Warden Harry Z. Cole to drain the Hankins Pond at Collegeville and to remove therefrom approximately 26,000 small fish of this year's hatch. This number was composed of approximately 9,000 catfish, 2,200 suckers, 9,000 shiners, 4,800 tadpoles, and 1,000 sunfish, all of which were placed in the Perkiomen between Collegeville and Graterford.

The Hankins Pond is one of the five ponds in which the MONTGOMERY COUNTY FEDERATION OF SPORTSMEN'S CLUBS raises fish for Montgomery County streams.

Clarence Burnside of Paoli who won the "Skish" event at the fall outing of the Lower Merion Rod and Gun Club.

From another of these ponds, the French Pond, located near Collegeville, members of this club also aided Harry Cole to take approximately 50,000 small fish, composed of approximately 1,000 catfish, 10,000 sunfish, 4,000 suckers, 2,000 tadpoles and 33,000 "shiners." These fingerlings were placed in the Perkiomen between Graterford and Zieglersville.

Tending the gatehole, carrying buckets of water and fish, washing the small fish, etc., were among the tasks performed by the boys on the above outlined occasions, as they helped Harry Z. Cole to help them toward better fishing.

Wissahickon Field and Stream Association

October 6 was a "Red Letter" day for this Association, too, as it opened its new trap shooting field adjacent to the Lock Ausch Reservoir just outside of Ambler. The shoot was a snappy one, at which club members had an opportunity to display their skill on clay pigeons while practicing to get their birds during the 1940 hunting season.

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HERE AND THERE IN ANGLERDOM

Wrote William Burke, deputy game protector, of Girardville just prior to opening of the recent trout season: "My thoughts drift back to another year's trout season, the fish I caught and those that got away. One of my pet streams is Penn's Creek, Centre County, where I have enjoyed many a day with my wife for the past five years. Last year we both caught quite a few trout 9 to 14 inches in length on a cowdung fly and the Green Drake mayfly."

Conservation education in the public schools is without doubt a keystone upon which much of the success of future conservation efforts will depend. We are happy to publish the following splendid report on educational work being conducted in the Northampton Township High School as received from Wayne S. Bitting of Richboro. "Enclosed you will find an activity program for the Sportsmen's Club at the Northampton Township High School. We had to limit the membership to 25 boys ranging in age from 12 to 18 years. They are showing fine interest and are now making bird feeders. Later in the season we are going to stage a conservation poster program. Each student will make an original poster and with these we hope to explain the necessity of conservation of wildlife. The Bucks County Fish and Game Association is donating a prize and will send a representative to the school to talk on conservation at the same time they present the prize."

Jakie Daubert of Valley View has every right to be proud of this dandy 20 inch pickerel he caught recently on a worm. Allen D. Koppenhaver snapped the picture.

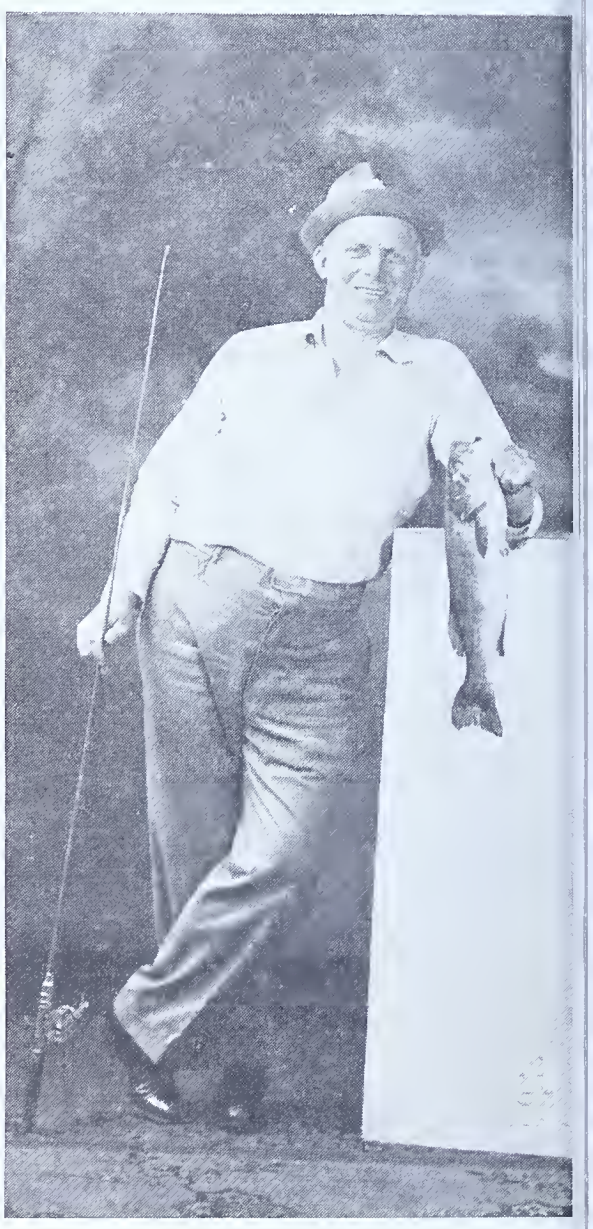
Ardent anglerette who is extremely adept with the casting rod and artificials is Mrs. Harold L. Thomas of Cambridge Springs in Crawford County. Her prize catch last season scored in French Creek, was a 30 inch walleyed pike, having a girth of 15 inches and tipping the scales at 7 pounds 12 ounces.

Inveterate bait caster with light lures is Adam Socher of Blawnox. During the past trout season, he did considerable investigating as to the effectiveness of the casting rod in taking big trout on little plugs. He writes: "Butler, Venango, Cameron and Potter Counties so far and no trout yet on the little plugs. I have not had a good weekend as far as weather goes, rain, cold and very high water. Am waiing for a picture of a 24 inch brown trout caught in the East Branch of the Tionest Creek in Forest County. They tell me it was a dandy fish."

Fish Commissioner Fred McKean of New Kensington calls attention to the proverbial nine lives, not only of cats but of catfish, in the following unusual report from Whitaker in Allegheny County. It seems that John Zak caught a catfish in the Allegheny River last September, brought the little fellow, 6½ inches in length, home in a burlap sack, tossed it into a lard can half filled with water, and forgot about it. Just before Christmas he went to the cellar and found the fish frozen stiff in the can. Then, it is reported, he broke the ice, put the fish in water a second time, and it came back to life!

Bill Williams of Wilkes-Barre has a particular liking for the trouting afforded by the Lackawaxen River in Wayne County. Reason? Last year, his trout fishing in that stream yielded him a brown trout 24 inches in length. This year was even better. Fishing in the same stream section he caught a brownie 27½ inches in length that tipped the scales at 5 pounds 8 ounces.

Veteran fisherman Charles Kear and his fishing comrades George Oerther and Dr. George Merkel, all of Minersville, made sporting catches of nice brook trout on opening day of the trout season in Schuylkill County waters, disproving to some extent that belief that low water temperatures prevailing in the streams would result in poor fishing.



William M. Houser of Lehighton with a fine 20 inch, four pound smallmouth bass he caught in the North Branch of the Susquehanna River near Wyalusing this season.

Reporting for the North Tier, Warden Leland Cloos of Middlebury Center, Tioga County, sent word that due to heavy rains, big Pine Creek was muddy for the bass season opening. According to Leland, however, a large number of bass were observed by trout fishermen on that stream in June and prospects are bright for an excellent season. He also reports that trout fishing in Big Pine this season was the best in years, all North Tier streams carrying a good flow to date.

— A PRAYER —

Oh LORD —
As this day of THANKSGIVING
Quietly draws to a close
And we sit with our memories —
We most gratefully thank Thee
For Thy manifold blessings.
We thank Thee
For the woods and the waters
And for many happy hours,
Spent in field and on stream.
We thank Thee
For the birds and the flowers
The sunsets over dark woods
And the joy of being alive
To know these moments
In Thy gardens
We thank Thee
For our code of Sportsmanship
And the friends who taught us
To love these things.
And — most humbly pray
If there be some place of Immortality —
We may feel again the handclasp
Of those friends, who have gone on —
Around the bend.

AMEN.

John Knowles

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Vol. 9. No. 12

PENNSYLVANIA ANGLER

DECEMBER, 1940

EDITORIAL

WITH the Yuletide season swiftly approaching, all thoughts of the Christian world turns to the observance of the birthday of our LORD. It is therefore, both fitting and proper that we unite in a sincere prayer of thanks for the privilege of living in a land untouched by the ravages of war. I firmly believe that all form of religion, whether pagan or ecclesiastical, was born of the minds of the men of the great outdoors and it is a happy heritage indeed, as fishermen, to be an integral part of that great American institution. Among the many diversions making for good, clean citizenship, I know of nothing which contributes more than the self-reliance, resourcefulness and wholesome environs to be gained and enjoyed, "out fish'n".

Throughout the year now closing, nothing was spared to provide a continuous flow of fish into the streams and waters of Pennsylvania for your sport and recreation. 1940 has really and truly been a grand year but 1941 will be even greater. The rearing ponds at our hatcheries are teeming with the largest supply of stock fish in the history of your Department. Large takeable fish that are sure to provide the thrill and excitement that only we fishermen have learned to know. The distribution will begin in the early Spring of 1941 when the trout streams will receive our first attention and the program will continue from then on until the supply is exhausted.

Yes, we have a lot to be thankful for and much to look forward to—and so, for the Board of Fish Commissioners, for our entire staff and for myself I thank you for your past cooperation and extend to you all best wishes for a very Merry Christmas and a most Happy and Prosperous New Year.

Sincerely,

C. A. French

Commissioner of Fisheries

Pennsylvania Record Fish for 1940

By ALEX P. SWEIGART

IN MANY respects, 1940 ranks as the most freakish year from a fishing angle in the history of the ANGLER Honor Roll. A cold and backward spring that carried through well into June, intensely hot weather in late July and early August and then a quick taper off to chill weather in September undoubtedly affected the sport. So drastic was this seasonal effect that many bass taken in August still carried eggs, and fishing not only in Pennsylvania but in other eastern states, as well as that in salt water, was generally regarded as way below par. The spottiness of the season is reflected in reports of outstanding catches for the year. In some divisions, a number of outstanding record fish were reported while in others, only one or two comprised the list. However, in spite of adverse conditions, some of the game fish entering the records this year stand up well in comparison to those taken in more normal seasons.

The Trout Season

Extremely cold weather and very low water temperatures prevailed on April 15 when Pennsylvania's army of trout fishermen invaded mountain and meadow streams. First day creels reflected these adverse conditions although some nice catches were scored, chiefly on worms fished deep. The trout were definitely sluggish due to extremely low water temperatures.

In the brook trout division, only two outstanding fish were reported for the season. Topping the list of natives was the splendid charr taken by Romaine Whittaker of Bushkill, in the Little Bushkill Creek, Pike county. The big brookie struck a live minnow for Whittaker on the morning of May 8. It measured 20½ inches in length and tipped the scales at 3 pounds 10 ounces. Girth was not given.

Al Kopitsky is all smiles and he's certainly entitled to 'em as he displays his record 7½ pound brown trout taken in Big Fishing Creek, Clinton County.

Record brook trout for the year was this 3 pound 10 ounce fish taken in Little Bushkill Creek, Pike County, by Romaine Whittaker of Bushkill.

Schuylkill county waters as in other years entered the brook trout fishing limelight. This time, the runner-up fish in the division was taken in Bear Creek, Schuylkill county, by Earl W. Jeffery of Gordon. The catch, scored on opening day of the trout season, measured 16 inches in length and weighed one pound 8 ounces. Red worm was the lure used, and girth of the fish was not given.

Several fine rainbow trout were taken, a magnificent fish caught in the picturesque West Branch of the Kishacoquillas Creek in Mifflin county topping this division by a comfortable margin. Bruce C. Harshbarger, veteran trout fisherman of Belleville, Mifflin county, carried off top rainbow trout honors for the state with a 25 inch rainbow, tremendously heavy in girth and magnificently colored, that weighed 6 pounds. Harshbarger also caught another fine rainbow in the same pool on this occasion, 21 inches in length and weighing 4 pounds. Both fish were taken on nightcrawlers.

Runner-up in this division was a fine rainbow trout caught in Spring Creek, Centre county, by Samuel R. McKinley, Jr., of Pleasant View, Centre county. Caught on the second day of the trout season, this rainbow was 25 inches in length and tipped the scales at 5 pounds 2 ounces.

Completing the trio of outstanding rainbows taken this year was a 23 inch fish caught in the Lackawaxen Creek in the northeastern section of the state. It weighed 4 pounds 14 ounces and was taken on a four ounce fly rod by William Verneau of Archbald.

Topping all brown trout catches for the year was the splendid fish taken by Al Kopitsky of Coal Township, Northumberland county. This giant brown trout fell to a minnow fished in Big Fishing Creek, Clinton county. It was 27 inches in length, had a girth of 14 inches and tipped the scales at 7 pounds 8 ounces. Runner-up fish in the brownie division was the trout taken in Big Neshannock Creek, Lawrence county, by Edward Arron of Volant. Taken on a nightcrawler, it measured 25⅝ inches in length and tipped the scales at 6 pounds 4 ounces. A brown trout taken in Yellow Breeches Creek, Cumberland county, by Ralph Graydon of Harrisburg was in third place. Minnow was the lure used in taking this brownie which weighed 5 pounds 4 onces and measured 25¼ inches in length. Another fine brown trout was caught in Raymondskill Creek, Pike county, by Frank Vandermark of Milford. This fish was 24 inches in length and weighed 4 pounds 12 ounces.

ANGLER HONOR ROLL 1940

Brook Trout

Length 20½ inches, girth not given, weight 3 pounds 10 ounces. Caught in Little Bushkill Creek, Pike County, by R. Whittaker, Bushkill. Lure used—live minnow.

Brown Trout

Length 27 inches, girth 14 inches, weight 7 pounds 8 ounces. Caught in Big Fishing Creek, Clinton County, by Al Kopitsky, Coal Township. Lure used—minnow.

Rainbow Trout

Length 25 inches, girth not given, weight 6 pounds. Caught in West Branch Kishacoquillas Creek, Mifflin County, by Bruce C. Harshbarger, Belleville. Lure used—nightcrawler.

Smallmouth Bass

Length 21½ inches, girth not given, weight 5 pounds 4 ounces. Caught in Conodoguinet Creek, Cumberland County, by H. A. Lower, Harrisburg. Lure used—casting spoon.

Largemouth Bass

Length and girth not given, weight 7 pounds. Caught in Laurel Lake, Susquehanna County, by Frank Turoski, Laurel Lake. Lure used—hair fly.

Muskellunge

Length 52 inches, girth not given, weight 33 pounds. Caught in Conneaut Lake, Crawford County, by C. W. McCready, Pittsburgh. Lure used—live chub.

Walleyed Pike

Length 33 inches, girth 16½ inches, weight 11 pounds. Caught in Lake Wallenpaupack, Pike and Wayne Counties, by H. O. Bidwell, Forty-Fort. Lure used—not given.

Pickerel

Length 25½ inches, girth not given, weight 4 pounds 5 ounces. Caught in Mountain Springs Ice Dam, Luzerne County, by Martha Labar, Kingston. Lure used—not given.

Eel

Length 44 inches, girth 9½ inches, weight 7 pounds 11 ounces. Caught in Susquehanna River, Snyder County, by Fred Roush, Hummels Wharf. Lure used—not given.

Carp

Length 36½ inches, girth not given, weight 24 pounds. Caught in North Branch Susquehanna River, Wyoming County, by John Beilik, Kingston. Lure used—not given.

C. W. McCready of Pittsburgh and Clyde Beers (left) of Meadville with 1940's record 33 pound muskie taken in Conneaut Lake.

Bass

Artificial lures again this year were in the limelight in taking outstanding smallmouth bass and largemouth bass in Pennsylvania waters. In the smallmouth division the Conodoguinet Creek, Cumberland county, produced the record fish, a bass, 21½ inches in length and weighing 5 pounds 4 ounces. It was taken by H. A. Lower of Harrisburg, on a casting lure. It was pressed closely for top honors by two other smallmouths, both taken on artificials. Bob Ebitz of Pittsburgh scored with a splendid smallmouth, 21⅝ inches in length that tipped the scales at 5 pounds 2 ounces. Concerning this catch, he writes:

"In accordance with your campaign to make fishermen plug conscious for conservation purposes, I am submitting a photo of a smallmouth bass, weight 5 pounds 2 ounces, caught on a plug just recently. By the way, I also caught a 4 pounder on a plug earlier in the summer. Since following your suggestions in various articles in the ANGLER, my results with plugs have been most gratifying, and most convincing when one considers the scarcity of bass in western Pennsylvania. Plug fishing can be most discouraging but there comes a time when one is repaid a hundred fold with a 'one in a lifetime catch,' as live bait fishermen term it. However, a consistent plug caster may experience such a thrill at least once a season."

Another splendid smallmouth bass was caught on casting lure in Harvey's Lake, Luzerne county, by Elmer Major of Trucksville. This fish, measuring 21 inches in length and weighing 5 pounds 2 ounces, was taken on August 3. Also on the smallmouth list of fish going over 5 pounds in weight was the fine bass caught in Aughwick Creek, Huntingdon county, by J. W. Brink of Irvona. A veteran fisherman, Mr. Brink was using a stone catfish when the big fellow struck. It was 20½ inches in length. A five pound smallmouth, 22 inches in length, was taken on stone catfish in the Conodoguinet Creek by A. B. Bishop of Harrisburg.

Only three largemouths over the five pound mark were reported. Record fish for the year in this division was taken by Frank Turoski of Laurel Lake, in Laurel Lake, Susquehanna county. It weighed seven pounds and was taken on a fly rod, hair fly being the lure used.

A plug fished by Samuel Miller of Swoyersville yielded the runner-up largemouth bass for the season. This fish, exceptionally heavy in girth, was 20½ inches in length and weighed 6 pounds 3 ounces. It was caught in Cummings Pond, Luzerne county.

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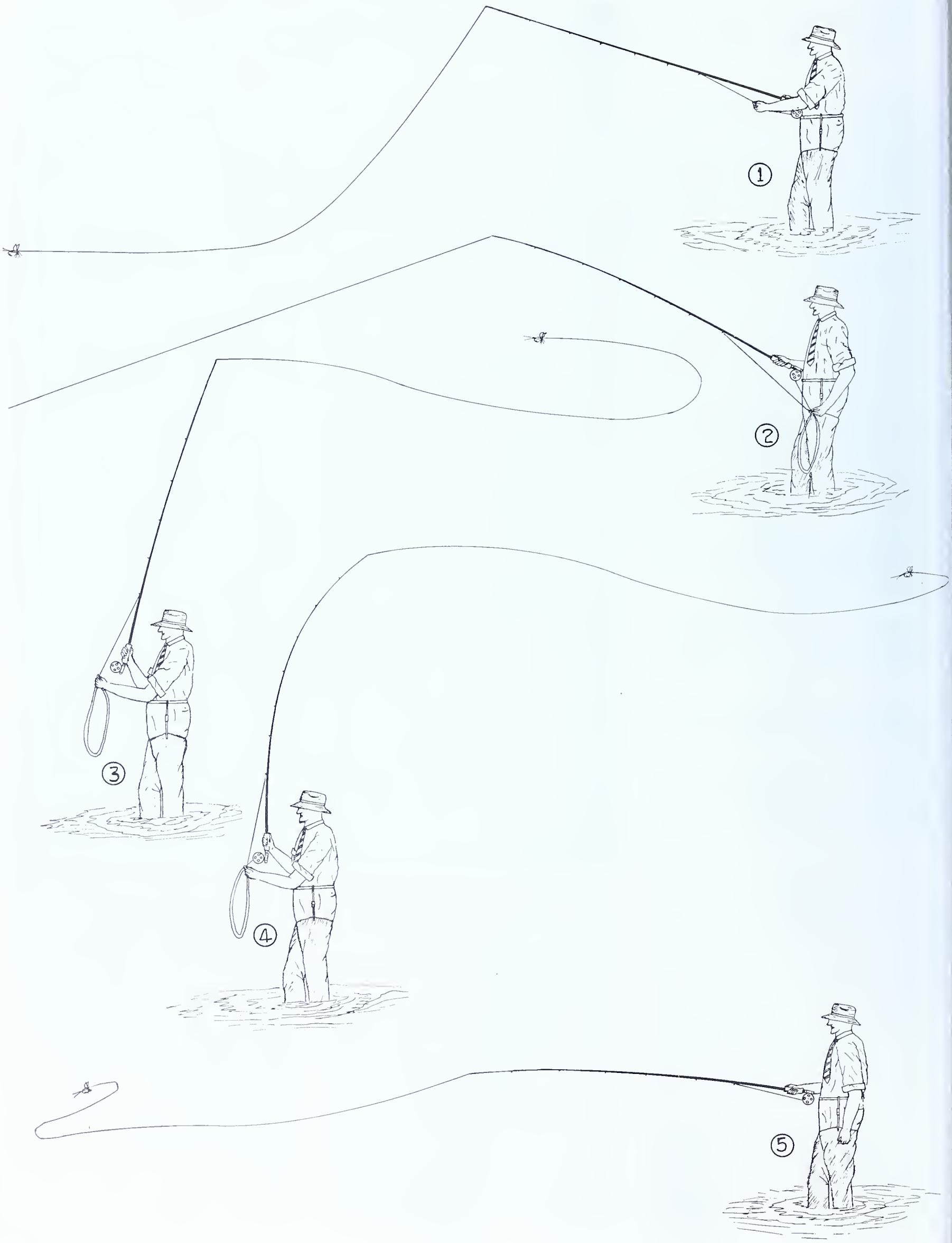
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FLY CASTING

By CHAS. M. WETZEL

(Copyright 1940 by Chas. M. Wetzel)

THE elements of fly casting are easily understood, but to become proficient at it requires much study and experience. Experience of course is the greatest thing, yet considerable study of the stream currents are necessary if one wishes to present the dry fly in a natural manner to the trout. In fly casting there is no weight to be thrown; in fact, the line alone is cast. Suppose we start in with elementals.

With about twenty-five feet of line, extended out on the water, as shown in Figure 1, slightly raise the rod tip, meanwhile reaching forward with the left hand and pulling back the line until it is taut. Throughout the operation, keep the right elbow close to the side.

Now with the taut line, and with coils held loosely in the left hand, lift the rod, accelerating its pace as it approaches the vertical, see Figure 2. When slightly back of the vertical, stop the rod and pause briefly, so as to give the line a chance to straighten out in the back. Figure 3 illustrates the angle at which the rod should be stopped.

I would here pause and say that the interval of time which must elapse before the start of the forward cast is most important. Probably the easiest way is to glance backward over your right shoulder and note the length of time required for the line to straighten out. Some will tell you that a slight tug wil be felt, but this is so small as to be scarcely perceptible. Do not place any reliance on it; in fact I have been fly fishing all my life and only notice it on very rare occasions, when a long line is out.

Now with the line fully straightened out in the back, start the forward cast with a strong sweeping movement, see Figure 4. The rod should be stopped slightly above the horizontal, but before this position is attained, the coils of line held in the left hand are released or "shot" through the guides. "Shooting a line" simply means that the coils held in the left hand are released when the rod in its forward journey is near the horizontal. At this moment lower the rod so that the least possible resistance is encountered. The energy imparted by the flying line is transmitted to the loose coils, with the consequence that they slide forward through the guides with no apparent effort. This "shooting the line" is most important; first, it enables one to secure great distance, and second, it allows the fly to fall lightly on the water. The end of the forward cast is shown in Figure 5.

The main thing to remember in fly casting, is that the entire operation is performed by the wrist and forearm. Later on when you become more proficient, and want to secure an extra long shot, the entire arm is brought into play; but in the meantime, content yourself with keeping the elbow close to the side.

The importance of the left hand in casting cannot be too greatly emphasized, for its functions are manifold. When striking the fish, a firm grip should always be kept on the line to insure setting the hook. It is also used in holding the coils and in stripping off line from the reel in getting out the required distance. Therefore, throughout your casting, always have control of the line with the left hand.

A few additional pointers might prove of interest. Never start the backward cast until the line is taut. If, in the back cast, the rod extends too far beyond the vertical, the fly will get caught on the brush or ground. Another thing, if the forward cast is started before the line has an opportunity to straighten out in the back, the fly may be snapped off.

Timing and coordination are the main things, and in a reasonably short time, you should develop both. After that the operations will become more or less automatic, and instinctively you will know when to start the forward cast.

Quite often in fishing brushy streams, stretches are encountered where trees, etc., line the bank in the rear of the angler. Here another problem occurs since there is neither room for the ordinary overhead or horizontal side casts.

Refer to Figure 1, and assume that the fly is lying on the surface of the water at the point "A." How it was cast that distance with brush and trees lining the bank, we shall soon determine. For clearness I have omitted the fly caster who is holding the rod at the angle designated as the first position.

With the right hand slowly raise the rod towards the vertical, meanwhile stripping in line which should be held in large coils in the left hand. Continue this retrieving until the second position is reached, when the line will be more or less taut. The fly will now have traveled over the water to the point "B."

Now with the right hand, bring the rod sharply downwards, slightly below the horizontal, meanwhile shooting the coils of line held in the left hand. During this movement, the fly will describe a curve in the air and alight at the point "C."

This cast is of the utmost importance in fishing brushy streams, and is applicable to any type of fishing. Until one has mastered its technique, he will experience difficulty in keeping the dry fly afloat, but after a little practice, it can be readily accomplished.

Ordinarily the cast is started by pulling the line off the reel until a length is reached slightly longer than the rod. Cast the fly a short distance out on the water, again stripping line off the reel to be held in the left hand. Shoot the line when the rod is traveling from the second position. If greater distance is required, retrieve the fly and repeat the procedure, described above.

The above is known as the "Roll Cast," and though it may look rather complicated on the sketch, yet you will find it comparatively easy.

At times it becomes necessary to cast a very long line, and when this occurs, a different method must be employed. To get out a particularly long shot, the entire arm as well as the body must be brought into play. The elbow is no longer held close to the side, but the entire arm travels back and forth in a stiff, straight groove, directly overhead. When compared with the ordinary graceful way of casting, this method looks extremely awkward, yet when it is mastered, shots over 100 feet are easily accomplished.

To get out such a long line, the left hand must be brought into play, that is, a pull is given the line, both on the forward and backward casts. This pull known among some authorities as the "left hand haul," is very important, but before you begin practicing it, take the following advice of one who has "busted" a number of expensive rods in learning the method.

First of all, take things easy. Do not strive for long shots until the haul is mastered; and even then, do not exert all your strength unless you are confident that the rod will take it. This pull puts the rod under a tremendous strain, the maximum bending moment occurring near the first guide, immediately above the grasp. Usually the largest ferrules are located near this point, and here is where the rod breaks. Some rods have strong serrated ferrules, while others might as well be made out of tin—they bend just as easily. If the ferrule is strong enough to take it, the rod might snap off immediately above it. This is another critical section, for here the outer fibres of the cane are turned or cut down to fit the ferrule, and these outer fibres largely resist the bending moment. Breaks like this often occur at the tip joint near the male ferrule, and are usually caused by the fly getting fast, just as the forward cast is started. The ideal rod would be a one piece affair, but since the length makes it impractical, the nearest to it is one made of two sections, instead of the customary three.

But returning to the left hand haul. After the fly is cast on the water, say 40 or 50 feet, take up all the slack line; then, before lifting the fly from the water, reach forward with the left hand and grasp the line immediately below the first guide. Now start the backward cast in the usual way, accelerating the motion as it reaches the vertical, meanwhile giving the line a decided pull with the left hand. When pulling the line, the left arm should be extended, and should travel diagonally downwards, away from the rod. Now with the line traveling backwards, allow 15 or 20 feet to slide upwards through the guides, shooting the line as it were, on the back cast. Care must be taken that too great a length should not be shot, for a certain amount of pull must be left in the line, for the start of the forward cast.

Now in the forward cast, and just as the line is straightening out in the rear, reach upwards with the left hand and grasp the line directly overhead. With both hands close together, start the forward cast, meanwhile pulling the line with the left hand, smartly downwards towards the hip. The line will now shoot forward like a thing possessed, and when its maximum velocity is attained,

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DRAGO

The Biography of a Dragonfly

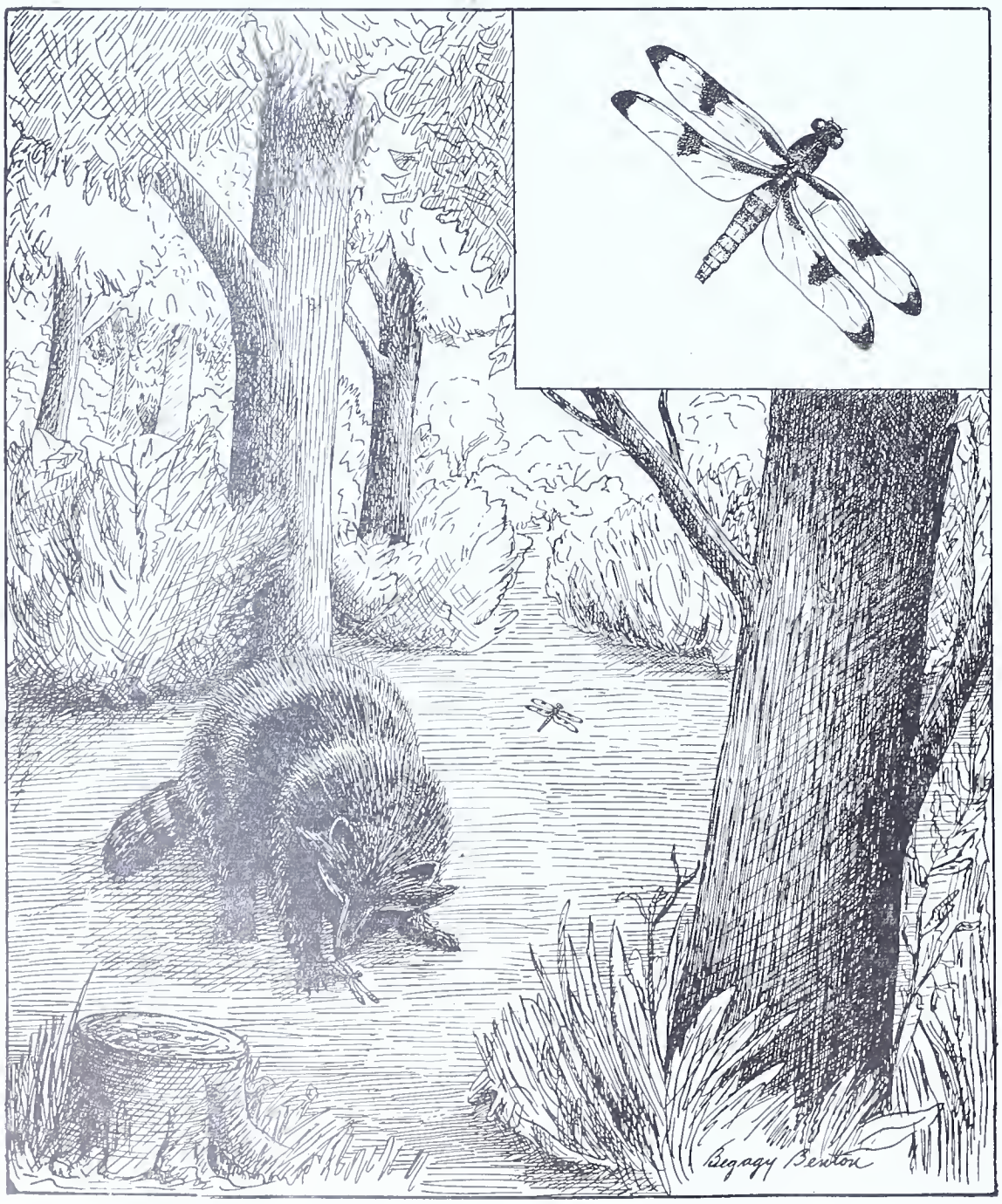
By CARSTEN AHRENS

Illustrations: Begagy Benton

DRAGO was a water-baby. He looked like a cross between a spider and one of those gruesome masks created by the Totem-pole Indians of Alaska. His great compound eyes semed to have the ability of ogling in every direction at once. His "teeth" were sharp, curved, cross-wise-moving structures. His appetite was like that of a modern dictator although he was prone to linger a little longer over each conquered tidbit. He swung on a reed that waved in the slow current of the East Harbor of Northern Ohio, but so common is his species that he might have been found in any low-lying swamp across the United States.

Now and again when some denizen of that soft-toned, underwater world would float noiselessly past, Drago would throw out his unique lower jaw and drag in some lake-food. If the victim was a little bullhead, (and he was very fond of tiny bullheads) he would neatly and leisurely skin and devour the poor little devil. One hour later would find just the backbone and head hanging over a waterweed . . . all that remained of what was once a vigorous bullhead; Drago would be cleaning the skin from his jaws with the first pair of his six legs.

It would have been a wise dragonfly who would have recognized Drago as his child because the immature water form is utterly unlike the adult aerial form except for its six long legs, its great compound eyes, and the ever greedy appetite. His father was of the species that is commonly called the "white-tails," for, as weeks pass, a bloom or efflorescence covers his abdomen a chalky white. Through the center of each wing is a broad black band that separates the transparent areas. He was a flashy insect whose appearance grew more and more striking with age.



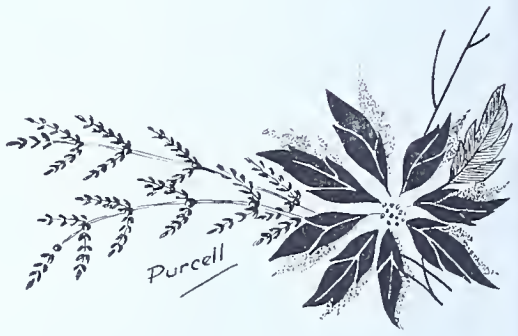
Drago's father and mother were very different in appearance. She was not so inclined to gather the white powder on her abdomen, and instead of having broad bands, she wore large, irregular spots on her wings. Incidentally, with but two or three exceptions, the male and female of any species of dragonflies in the United States look superficially alike. The white-tails are one of these exceptions; the color patterns on the wings of Drago's parents were so different, that the two insects did not seem related.

Drago's mother, like Nature, was extravagant almost beyond belief. To produce great numbers of eggs and trust to a most indifferent fate that some would escape the hungry maws of frogs and fishes seemed her design for living. In the few weeks of her adult life she laid a hundred thousand eggs. But that verb gives the impression of careful placement, and Drago's mother, in one's most generous mood, could not be credited with such activity. As she came skimming along, close to the mantling surface of the stagnant swamp, she would frequently strike the water with the tip of her many-jointed abdomen. This liberated a small cluster of pale ovals that sank slowly to the muddy bottom. After she had scattered a few hundred eggs, she would rise high in the air to be joined by one of the watchful males who were circling, zooming, and banking above her. One would succeed in clasping his stout abdominal appendages just behind her head, and then, in tandem, they would streak up-up until almost lost to sight. In a short time she would return, and the procedure would be repeated over and over again until she had carelessly splashed away the prodigious number of eggs she was destined to lay.

Occasionally she would give herself a vacation by leaving her lovers and the lush marsh plants. Like an arrow she would skim to an open glade in a woods perhaps a half mile from the swamp. Here, with her six legs arranged like an open basket, she sailed back and forth through the swarms of gnats, midges, and mosquitoes that pulsated in the air. She captured and devoured on the wing. She followed a regular beat: up one side of the clearing, down the other side, around and around she went. Once in a while a larger insect would cross her path, and in a split second she would attempt to add it to her menu. And she would succeed unless the newcomer was considerably bigger and stronger than she. Once she attacked a dragonfly that was twice her size, and both flashed with the sound of crumpling cellophane to the ground. A half-grown raccoon was digging aimlessly there. He brought his baby-like foot down

(Continued on Page 18)

George Benton



THE first lesson this writer had drummed into his thick skull many years ago in an old time newspaper office was that omnipotent law to toss the thunderbolts into the first paragraph, then elaborate on the harrowing details. No doubt the same code is being hammered into the ears of startled, unbelieving Fourth Estate cubs e'en unto this day. While your correspondent is still a newspaperman, yet this publication is not a daily and we are gleefully taking the liberty of thumbing our aging nose at the old nemesis in one last glorious splurge of revenge. Our denouement will come many paragraphs later.

Now let us ponder a moment. It goes without saying that you must be a reader of the magazine otherwise you would not be perusing this article. Also you are likely an active fisherman, or at least more than a little interested in the sport. But why do you read the PENNSYLVANIA ANGLER? Do you find it entertaining? Are there discussions on tackle and hints on technique that serve to improve your stream poise? Perchance you are interested in the growing movement toward conservation of fish and fishing? Would you like to see as good or better sport ten years hence, twenty or a hundred? Our fathers passed the bass and trout on to us who are working the streams today. Are we going to pass as many on to our boys and girls when we travel off to that far-away land from which no fisherman ever returns?

Are you willing to listen to a plea to put PENNSYLVANIA ANGLER into the hands of more fishermen, not only as a medium of entertainment and as a vehicle to improve stream poise, but more important as a constructive move toward more widespread interest in conservation? The writer sincerely believes the idea worth serious thought and that the possibilities might well run beyond estimate. Likewise the idea as it unfolds is purely his own and he has in no wise been inspired, influenced or egged on by either word or implication on the part of any single individual, group or associated body.

As a reader you know millions of words are being written annually on the subject of conservation and better fishing for all . . . countless hours out of what otherwise might be personal leisure time are being devoted to the movement by earnest, sincere and far-seeing sportsmen.

But are these words, these constructive physical hours, these back-breaking, dam-building, weed-clearing, vermin-controlling, pollution-eradicating, forage-planting and restocking activities always coming to the attention of *all* the right parties?

Is the fisherman at present inactive in conservation and not a member of a sportsmen's club fully cognizant of what is happening behind the scenes, who is doing it and why? Is he aware of the problems of fish culture and propagation both within established hatcheries and in the wild state as disseminated by the Board of Fish Commissioners; does he appreciate how zealously a little group of highly specialized and earnest men constantly explore and work for the possibilities to his best interest? Is he viewing constructive improvement and regulation as such or is he indifferently taking fishing for granted?

Is the written word of the conservationist read only by a brother conservationist; is stream development appreciated only by those who participate in such improvement physically?

Is the true sportsman's creed "Fish more for fun and less for meat" going over as it should? Granted much progress has been made, is the movement traveling fast enough to keep pace with the growing army of anglers and possible depreciation of stream resources?

Is it generally accepted that fish and forage, the former wholly dependent upon the latter, are natural stream resources? That no amount of stocking will suffice generally if the forage is not there for the fish? That once balance is destroyed, a downward cycle gets underway . . . that less fish and smaller fish are in immediate prospect with perhaps complete exhaustion not an impossibility?

Would anglers go into a favorite stream and tear up rocks in search of helgramites if they fully realized the act might seriously impair fishing thereabouts a year hence? With the same knowledge would they seine out minnows almost to the last specimen at another place? Would they dig worms on the banks of a stream and thereby give rise to erosion which might possibly smother out thousands of baby bass or trout at spawning time? Would they carelessly throw tin cans, rubbish and paper into the stream, an act that while it might do no harm, still certainly will not make the water any purer or better able to sustain fish life?

It is not that the average fellow intends to be indifferent. In fact the average angler would bitterly resent the suggestion that he is not carrying his end. *But often he does not know; he doesn't realize.*

The fishermen of Pennsylvania are indeed fortunate in having a medium of expression and suggestion such as the PENNSYLVANIA ANGLER. But is the magazine distributed widely enough? Again is it always getting into the hand where enlightenment is most needed? You and I know excellent articles extolling the virtues of good sportsmanship, the wisdom of long range vision, the story of depletion and ruin, the contrast of conservation and reasonable sport for all, appear month after month, issue upon issue. But where does the non-reader get his information, if any? Is it always unbiased and authentic? Who does he mean when verbally castigating "they" after a barren trip or a particularly disastrous season? You, I and he are "they"—we the licensees have a mutual corporation—but does he know it?

The writer confesses to an absymal ignorance as to the far-seeing vision under which this magazine was created and its intended purpose, what legal limitations surround the foundation and how widely it is distributed among Pennsylvania's some 400,000 licensed anglers. Purely from limited personal observation he fears the publication may be distributed for the most part among members of fish and game associations, and men already banded together in the interest of better sport and becoming more conscious of that ideal every day. And he does recognize in this little messenger a medium without parallel to carry the story of conservation and personal responsibility to the non-organized Ike Walton, the fisherman who either by choice or circumstances beyond control has not become associated with an active club.

FIRST FISH- "WELL I GUESS WE'LL HAVE TO MOVE. THERE GOES OUR FORAGE"
SECOND FISH- "YES THAT RIFFLE WILL BE RUINED FOR YEARS."
= Olga McEnany =

This fisherman sincerely believes a man who has read the PENNSYLVANIA ANGLER for a period of one year is well on the way to becoming actively interested in conservation; that degree by degree he will learn to appreciate his personal responsibility toward good fishing, and in many instances will hasten to make up for lost time; that if we thoroughly awaken our four hundred thousands of licensed anglers, Pennsylvania will always have good fishing; that while the giant is beginning to rumble in his sleep, he has not become sufficiently alarmed as yet to throw his full mobilized strength behind the movement for continuing and better sport.

It is the custom of some fraternal bodies, veteran societies and welfare organizations to include the official mouthpiece in the membership fee. Periodically the publication is delivered to the member, and even if friend member is not attending meetings, still he is maintaining contact with what is transpiring. While the PENNSYLVANIA ANGLER is the Keystone fisherman's official mouthpiece, still anglers collectively are hardly to be classified at present as always holding to one set interest or purpose such as fraternal societies, veteran organizations or charitable groups. And literally there are thousands upon thousands of licensed fishermen in this State wholly unacquainted with the magazine. Many thousands probably never even saw a copy. Some sportsmen's clubs now subscribe to the magazine in a group for the membership, a worthwhile idea indeed, but not sufficiently widespread. A suggestion that others give serious thought to the possibilities might not be out of place. While it may be possible in some states to include their publication with the license, this is impossible in the Keystone State due to legal restrictions; likewise probably undesirable were it permissible. Force is seldom the best medium to attain a lasting goal; pride, pleasure and education are better modes of attack.

And now for the long overdue denouement. Brother Angler, why don't you put our little publication on your Christmas list, once, twice, a dozen times if you can afford it, and while you're at it on your personal sales list every day of the year? Wasn't there someone you fished with last season it would be nice to remember? How about the farmer up along the trout stream? Are you going back next spring? Or that fellow down along the river where you park while bass fishing? How about Bill or Jake with the big families and not too much money? Likewise the devil-may-care buddy, able to afford it, but who just waits on *manana,* and as any Espanola can tell you, manana never comes.

Let's quit coddling conservation; let's start proselyting it! Let's quit reading one another's articles about good sportsmanship, and take the other couple hundred thousands of fishermen into the secret with us! No doubt some of them will get angry with us and raise the very deuce when they learn such an excellent little magazine, doing such constructive work, may be purchased for 50¢ per year and they haven't had it. But they'll get over their peeve, take up the torch too, get to work and probably crowd you and me right off the pages of this publication.

If your interest serves no purpose other than to convert some in the present army of live bait fishermen to become users of artificials, the effort will be well worthwhile. At the risk of being damned by every live bait fisherman in the State, this angler ventures the suggestion, "Show me a plugger or a fly rod sharpshooter and mostly I'll show you a conservationist." Artificials and conservation seem to go hand in hand, one is synonymous of the other. No matter how sincere the live bait man may be, no matter how frugal with personal consumption, he can not deny he is destroying forage. When too many fishermen destroy forage, all anglers suffer together.

And do not forget—this is your magazine—my magazine; it belongs to the fishermen of Pennsylvania. It will ever be exactly what your interest and my interest make of it—its enduring importance in the annals of fisherdom will ever be measured by the yardstick of our collective interest. If by word or act, you and I are privileged to utilize the magazine in such a manner as to improve our fishing and the other fellow's fishing, then the edict is clear, the direction is ahead.

It is this fisherman's earnest opinion that each reader of the PENNSYLVANIA ANGLER should ever be on the alert to secure another reader—either by outright solicitation or as a medium of tendering personal felicitations. The subscription price is insignificant, but the value is mighty. Show those backward pals the error of their neglect; use it as a personal reminder on anniversaries, birth-

(Continued on Page 17)

A rite smart scad o' the boys eround this neck o' the woods ud jest erbout ez lief fish fer suckers ez ennything we got in the big crick. Cum winter an erly spring, ef the water keeps open, a feller kin hev sum mitey gude fun with them fish. Don't know ez I ever tasted enny fish thet is sweeter er better eatin' atter the water gits gude an' cold. They be a mite boney but they shure be different fish then when a fisher gits them in summer.

Now we bin notin' thet our suckers hez bin gittin' more scaircе in the crick the last few yeres. Uster be a feller cude go down ter whare the run cums in of a nice warm winter day an' ketch him a string o' 6 er 8 big suckers, an' now we figger a ketch o' 3 or 4 ter be fare gude. Jest stoppin' ter figger the how o' them gittin' scaircе, I reckon mebbe dams in our crick hez sumthin' ter do with it. Taik thet run o' big suckers frum the river. They kin move upstream erbout 5 miles an' then a dam stops 'em. I seed a scad o' the fish, big fellers, anozin' eround in the fast water below the dam brest last spring an' I reckin them fish dropped their eggs an' the lot wuz lost. They's only a few runs atween the dam an' the river fer 'em ter move up inter afore they git ter the dam. Reckin you know thet suckers'll move up a run er crick erbout ez fur ez they kin go ter drop their eggs an' often when a feller is nettin' minnies fur up ter the heds o' runs he'll ketch a lot o'yung suckers.

Jest erbout the best thing thet ever happent wuz when the fish commishun made giggin' unlegal sum yeres back. Menny's the day I reckallect when a bunch o' us ud take a pine flare made o' a pithy pine knot an' gig ez menny ez a bushel o' big suckers in a nite. Course thet wuz in the days when settin' hoop nets on riffels wuz legal, too. I wuz shure glad ter see both nettin' an' giggin' go by the borde an' most o' the boys eround here felt thet way tew.

Reckin a feller shude onley taik ez menny suckers ez his family nedes, 4 er 5 at most, ef he wants ter do his part in holdin' this kind o' fishin' fer them ter cum later on.

Question: Am planning to get my 12 year old son a bait casting outfit for Christmas. Would you suggest type rod, reel, line, etc., that would be best suited for fishing in our waters? H. R. W.

Answer: Since it is to be assumed that, for a beginner, the casting outfit will be given some rough usage, perhaps the best bet in the rod line would be a tubular steel of the better known makes, with offset reel handle. Would suggest the 5½ foot model since probably lighter lures will be found most satisfactory. Rods of this type perform nicely. If a bamboo is chosen it should not be under 6 feet, with light or very light tip action designated. Now, as to the reel, manufacturers have built light spools into some of their less expensive models, retailing at from five to ten dollars, with the result that some excellent casting can be attained. It might be advisable to secure a reel with a cork arbor. On this arbor, 50 yards of standard 12 pound test waterproof casting line fills the reel spool nicely. When it comes to selecting the line, hard braided waterproof silk line of 12 pound test will do nicely for a starter. Later, after the youthful angler starts dropping his casts with accuracy, it is a good plan to switch to soft braided lines that are waterproofed. While these lines will not give the wear attainable with hard braided lines, they are to be preferred by anglers who like to place accuracy and distance over wearability. To complete the outfit, two 10 yard coils of artificial gut, 10 or 15 pound test, half dozen snap swivels, size 12 swivel and size O snap, and half a dozen good light lures might be suggested. These should weigh from one quarter to half an ounce.

Question: Securing worms for winter sucker fishing has always been a puzzler to me. Could you offer any suggestions on how to keep bait during the winter months? M. K.

Answer: W. R. Walton, senior entomologist, of the United States Department of Agriculture, offers the following splendid advice in this matter in the U. S. Department of Agriculture Farmer's Bulletin No. 1569, *Earthworms as Pests and Otherwise:*

"The worms should be collected in a clean vessel, such as a fruit jar or a thoroughly cleansed tin can. They should not, however, be allowed to remain indefinitely in a metal container, as they survive much longer and in better condition when kept in an earthen crock or a tight wooden pail or box. The writer has found a 3 gallon stoneware crock, containing about 8 inches of mellow earth covered with a 2-inch layer of plant material such as sphagnum moss, sods or even common chickweed, excellent as a storehouse for 100 or more large earthworms. In such a container, kept in a cool corner of the cellar, the worms remain in good condition for weeks; and almost indefinitely when fed a little finely divided bread crumbs. These may be sprinkled upon the surface of the soil in the container, underneath the plant material. Either sweet or sour milk may be fed, but becomes offensive unless the earth is changed frequently.

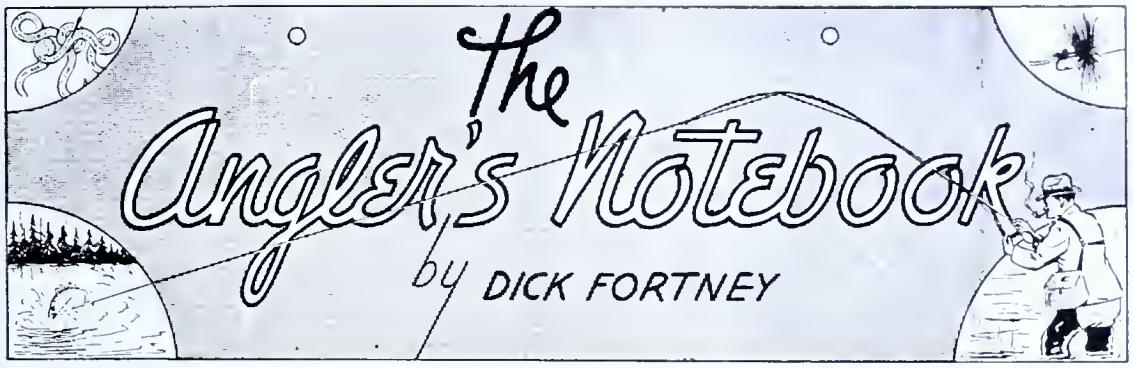
"Although earthworms may be used freshly dug from the ground, they are much more desirable, will live longer on the hook, and will take more fish if well 'scoured' before use. To carry out this 'scouring' process a quantity of sphagnum moss such as is used by nurserymen in packing plants for shipment is put into a stoneware crock or tight wooden box. This moss, which grows in shady, swampy woods, should be well moistened, but the excess water should be wrung out before the moss is placed in the container. The worms should be placed in the moss for at least two days, and preferably three or four, and kept in a cool place. At the end of this period they should be almost transparent, tough, and lively. In case it becomes necessary to keep them in the moss for some weeks, a little sweet milk should be poured over them at intervals of about a week, but the moss should be washed and wrung out in clean water every week or 10 days."

WINS CONTEST

True to a vow made several times during the season, Regius Feick, ardent Strausstown sportsman, this year repeated his success of 1939 by displaying a 19¾-inch brown trout at the F&F Shop, Third and State Streets, Hamburg, to better the catch of a 17½-inch specimen previously registered by Philip Eyer.

Feick's catch entitled him to a prize of $10 worth of fishing tackle offered the winner of the F&F Shop's contest. The 42-year-old Strausstown angler, accompanied by several friends, motored to Big Creek a Pocono mountain stream near Kresgeville, to hook his trout in the same locality where he landed a 19½-inch fish on Saturday, June 10, 1939, to capture top honors in a contest conducted by P. F. Hess.

Although gutted, the trout displayed by Feick was a splendid specimen, tipping the scales at 3 pounds 9 ounces whereas Eyer's best catch, made in Spring Creek, a tributary of the Little Lehigh, on May 14, weighed only 1 pound 8 ounces. Feick's 1939 prize winner had also weighed but 2 pounds 7 ounces although it was only ¼-inch shorter than this year's champion.



Editor's Note: Anglers are laying aside their rods and lures for the next couple of months—until spring returns to awaken the trout streams again. But during the winter Dick Fortney will continue his Angler's Notebook, discussing some live topics that should furnish plenty of food for thought during long winter evenings.

HOW much do you actually know about the favorite stream where most of your angling is done? How well acquainted are you with the rocks and riffles, the pools and turns; with the favorite hiding and feeding places of the fish that live in the stream; with the cut-under banks, the sunken snags and logs; the gouged out spots in the bottom?

Do you have a picture in your mind of just where to fish pool after pool, or are you one of those anglers who just stops at the most convenient spot, wades out into the stream, and ambles along until it is time to take down the rod and return home?

If you haven't mapped your favorite stream—in your mind, not on paper—you are missing half the fun of fishing.

Last spring one day, seeking some of the fine trout that inhabit Loyalsock Creek, in Central Pennsylvania, the writer had an unusual opportunity to look over the bottom of a large pool. The sun just happened to be in the right position to bring out in bold relief an oddly-shaped pile of large rocks in what must have been about six feet of water. The stream was a bit high, as is usual in the spring, but it was possible to wade far enough out into the pool to distinguish fish moving lazily about the rocky spot.

They weren't trout, either. They were a school of rock bass—but the fish that caught the eye was a fat, smallmouth black bass.

A mental note was made of that fine fish and of the spot. Weeks passed and then one evening just at dusk we returned to the spot. The creek was lower by now, and the pile of rocks was easily located. It was too near dark to observe any signs of life in the water about the rocks—but we had a hunch the big fellow still was there.

A deer hair bass bug with brown body and white tail and whiskers standing stiffly out was the chosen lure.

On the first cast a rock bass smacked the bug but missed.

The pool was rested and the bug sent flying out again. On the second cast there was a swishing strike, the rod whipped in an arc for an instant, and then the fish was gone.

"It was a fine bass!" explained a friend standing downstream a short distance. "I saw him rise to the bug, then swirl away. I think he went into the rock pile."

Again the pool was rested. The lure was changed, a bug with a black body and white whiskers, but with a generous red tail, was substituted.

On the first cast the bug vanished in a shower of spray, and the reel sang as line zipped out. Boring deep, the fish rushed first upstream, then down and finally swung in a wide circle toward the shore behind us. It came to the net after a while.

It was the smallmouth of the early spring I feel sure. It was exactly 16 inches long and it weighed just one ounce less than three pounds.

Sure, bigger bass have been caught in Pennsylvania—but the point of the incident is this: That fish lay in that rock pile literally weeks, while scores probably fished through the pool, but it fell to the lure of an angler who had studied the water and spotted its hiding place long before the first of July.

That incident serves well as the text for this discussion—a suggestion to all anglers that not only can they have a lot of fun, but also they can store up for themselves more strikes, if they will but take time in late autumn, even in winter, and in early spring to make a thorough study of their favorite pools in trout and bass streams.

It's a pleasant and an easy job.

A trout brook or a bass stream in the off season is not as pretty to look at as it is during the summer, of course. But it's not lifeless by a long shot, and it is quiet and undisturbed so that the fish that inhabit it are not continually in hiding.

Think over some of the observations that can be made.

Take a long look at that riffle you have passed over as too shallow—and don't be too surprised if along about the middle of it you

(Continued on Page 19)

Appealing mountain trout water.

SOME SORROWS OF THE ANGLER

By W. R. WALTON

Bureau of Entomology and Plant Quarantine, United States Department of Agriculture

PART II

THE lotions recommended for mosquitoes should give relief from attacks by these flies.

One of the tortures which Dante might have assigned to the damned souls, but regarding which he fortunately was ignorant, results from the bites of the almost invisible arachnids, or mites, notorious throughout the American countryside as "chiggers." The name "chigger" or "chigoe" belongs properly to a tropical flea which has the unpleasant habit of burrowing under the toe nails of bare-footed humans to rear its brood of young. The term probably became applied to the parasitic mite through the agency of some traveler from the tropics upon his painful introduction to our American chiggers. Our chigger mites have been studied by H. E. Ewing, of the Federal Bureau of Entomology and Plant Quarantine, who assures us that, contrary to the general belief, they do not become embedded in the skin of the victim but merely insert their beaks into the true skin in order to engorge with the blood. They live normally upon such animals as rabbits, field mice, rats, quail, poultry, toads and even snakes.

These mites are very active and according to Dr. Ewing, "The belief has been almost universal that chiggers in this country are found in the grass. Observations have failed to confirm this theory. It was found that our northeastern species occurs almost exclusively at or near the surface of the soil. People frequently get chiggers when they go into the grass, but our eastern species approaches from the ground. If chiggers attack man almost solely from the ground, the question may be asked, how are we to account for attachment around the waist, under the armpits and about the eyes? When one simply walks through a chigger infested region, the (mite) larvae are first found about the feet and ankles. They run with great rapidity, so fast in fact that it is very hard to catch them. From the ankles they spread upward, few as a rule attaching here unless the clothing is tight. As they pass upward, many of the chiggers either stop themselves or are stopped at the garters." It should be explained that this was written in 1921, before the custom prevailed of permitting the socks to accumulate around the ankles like a pair of deflated auto tires. Dr. Ewing continues: "If they pass the garters, large numbers will attack under the knees." I'll tell the world! "Those that pass the knees usually go as far as the waist line before they attach. For a great many minutes, sometimes for a few hours, the larvae run over the skin hunting for a favorable place for attachment." It is thus apparent that chiggers are quite "choosey" about locations upon which to squat on one's carcass, and this may account for the delay that usually is experienced in detecting their presence on the body. After a day afield, just as one is feeling open to congratulations upon escaping infestation, he is likely to arise in the morning covered with a crop of pustules that both look and feel as though he has an incipient case of smallpox. In such cases my personal reaction is to reach for a vial of tincture of iodine, equipped with a glass rod, and deposit a generous drop on the center of each wheal. The iodine kills the mite and assists in preventing any secondary infection which may follow the irritation set up by the bite. It does not, however, cure the bite which may endure for several days.

A very good defense against these mites, and one which I have found efficient, is to rub a good dose of powdered sulphur on the shins, around the waist and on the arms before going out to fish in the brush. Some persons are sensitive to sulphur thus applied, but usually it causes no irritation, and is well worth a fair trial. Laced or rubber boots, with the trousers tucked in them, are also helpful in avoiding serious infestation. Here again the preventive measures are the more valuable for prompt relief from severe infestation is just not available.

Although one may without censure approach the strictly entomological sorrows of the local angler with some degree of levity, the subject of ticks and tick bite is one of the utmost gravity.

Spotted fever, or as it once was called "mountain fever," which is transmitted to man only by certain species of ticks, is so often fatal and invariably so severe a disease, that exposure to tick bite should be avoided with the greatest of care.

Although this disease is transmitted in the Rocky Mountain States by another species of tick, the only one which the Pennsylvanian, Marylander, or Virginian need fear is the common dog tick (*Dermancentor variabilis* Say). Although other species of ticks in these states carry disease to both wild and domestic animals and birds, the dog tick, common in the brush along trout streams, is the one that threatens the safety of the angler here. This tick, according to F. C. Bishopp of the Bureau of Entomology and Plant Quarantine, overwinters as either unfed young or adults. It emerges from winter quarters during the first warm days of spring and thus usually is awaiting the angler on the opening day of the season. Its scheme of "blitzkrieg" is to climb up the brush to the tips of the twigs and there with widely open forelegs, motionless and patient, await the angler, ready to grasp instantly any portion of his clothing or anatomy that may approach near enough. When successful, it endeavors to find an opening in the clothing and thus gain access to the skin. The process of attachment by this tick is rather slow for the victim must not be alarmed. It may attach to almost any part of the body, but the favorite location is the thick hair of the head around the crown or over the ears. Safety from tick bite may be attained by thoroughly examining the entire body after a day in the field or on the stream. Unless you happen to be a member of the bald-pate fraternity, a thorough search of the scalp should be made. For this purpose a fine toothed comb or "catcher" is most useful. In case an attached tick is found, the greatest of care should be exercised to remove it without leaving any part of its proboscis in the wound. Usually a drop of mineral oil placed on its body will induce it to loosen its hold. The wound should then receive a drop or two of tincture of iodine of the ordinary drug store strength. If difficulty is experienced in removing the tick, medical aid should be sought at once.

3.
Poison Sumach

The period of time that the tick has remained attached is known largely to determine the danger of infection with the fever. Medical authority now seems agreed that the danger period is from 4 to 6 hours or more. In the eastern states, however, even in localities where spotted fever is known to exist, only about one tick in 300 is capable of conveying the infection. Nevertheless, since deaths from this disease occur annually in Pennsylvania, Maryland and Virginia it is dangerous to take any unnecessary chances with tick bite at any time. Vaccination with anti-tick serum is obtainable from the physician in case protection from possible infection becomes necessary.

We now approach a possible source of piscatorial sorrow which is non-entomological and fortunately, to which not all anglers are susceptible. I refer to ivy poisoning usually resulting from contact with the plant known botanically as *Rhus toxicodendron*. Says Thomas Moore:

> *"On my velvet couch reclining,*
> *Ivy leaves my brow entwining,*
> *While my soul expands with glee*
> *What are kings and crowns to me?"*

Fortunately, the poet did not know the angler's enemy, and refers here to the innocent vine of churchyard and crumbling ruin, for anything else than glee would re-

sult from such a contact with our poisonous American weed. It abounds on many stream banks in the Atlantic coastal region and is an ever present menace to the safety and comfort of the angler who happens to be susceptible to its poison. The plant is constantly distributed by many of our most valued song birds, including the robin, which are especially fond of its yellowish-white berries and in consequence drop the seeds indiscriminately.

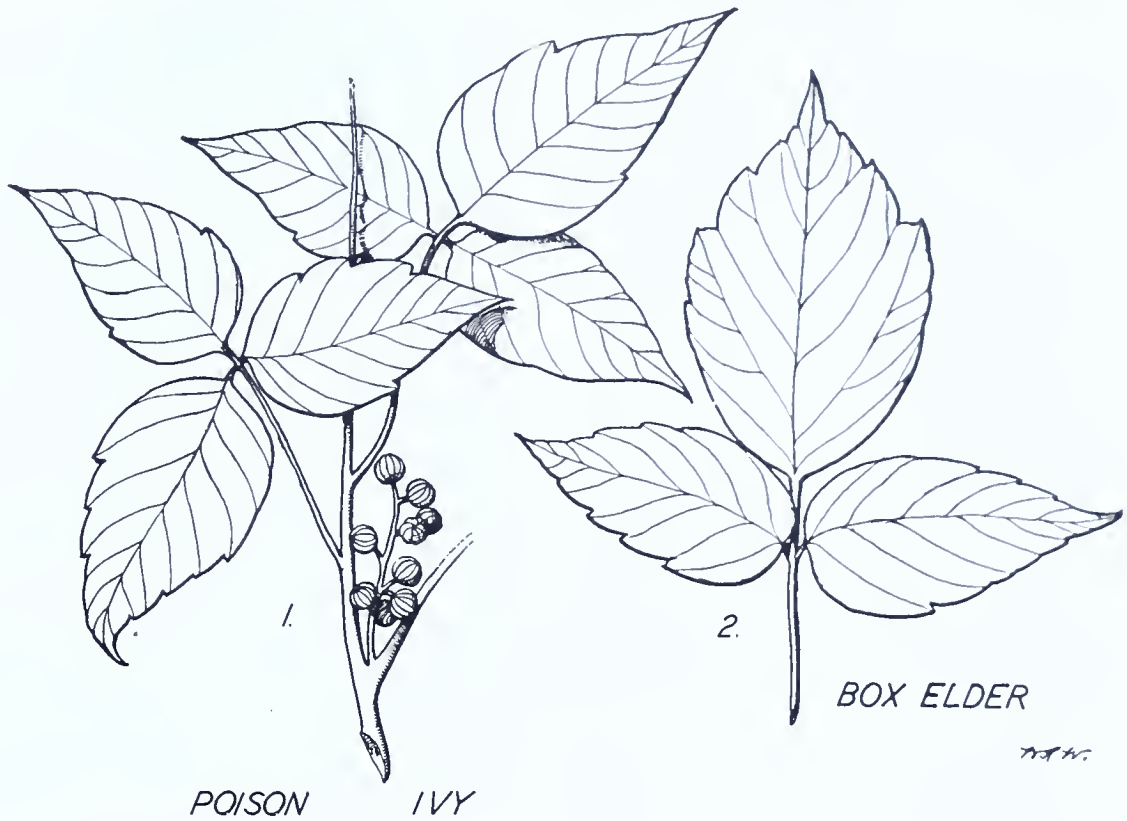
Fortunate is that, comparatively rare, individual who is resistant or immune to the effects of this poison. This is now known to consist of an extremely sticky, viscid, resinous sap secreted on all parts of the plant but especially on the leaves. It is practically insoluble in water but is readily dissolved by alcohol, chloroform, or benzene. Actual contact with the plant is not necessary, as its sticky juice may adhere to any dry surface and thus poison an unsuspecting victim.

A serious case of ivy poisoning or "dermatitis" as the doctors call it, is pitiable. Burned deeply into my memory is my first experience with this noxious plant. A swimming bout was the occasion, when, responsive to the shout "last one in is a sucker," I shed my scanty garments, helter-skelter, inside-out, and plunged into the old swimming hole, wholly unconscious that my clothing had alighted in a jungle of poison ivy. It was afterward donned and worn until bedtime. It were better to draw the veil of silence over sufferings of the following week while, swollen like the proverbial "poisoned pup" I received any and all of the alleged "cures" proposed by the old women of the neighborhood. For such a case, however, there is no such thing as immediate relief; hence be it remembered that "an ounce of prevention is worth a ton of cure" for ivy poisoning.

The first measure of defense therefore is to know the plant when it is met. In the eastern states, the foliage (Fig. 1) of poison ivy varies only slightly in appearance, but its growth or vegetative form is quite variable. When mature it usually is a frankly climbing vine often having a stem or trunk from 2 to 4 inches in diameter. In this form it may climb the tallest trees overhanging the stream, with its foliage and berries pendant over the water. In this case the angler will do well to avoid casting or back-casting into the leaves, as he may easily become poisoned in this way by afterward handling the line or lure.

Perhaps the most common form of this plant along streams is as patches of erect, slender, woody shoots, sometimes 3 feet tall, through which the angler may be compelled to wade in order to reach his pool. In this case the hands and tackle should be raised and held high enough to escape contact with the plant.

Although not all woodland plants that bear leaflets in clusters of three are poison ivy, if one avoids all such plants he will remain safe from harm. One innocent plant which, in its seedling or sapling stage, closely resembles poison ivy in having leaflets in triple clusters, is the box elder or cut-leaf maple (Fig. 2). Furthermore, it frequently grows as a neighbor of the poisonous plant,



in damp, shady locations on the stream bank, but if one remembers that

"Leaflets three may poison thee,
Touch them not and happy be,"

this plant may be disregarded.

Now as to clothing that is defensive against ivy poisoning, the wearing of laced top boots or rubber boots with the trousers tucked into them is quite helpful in keeping ankles and legs from all contact with the plant. For protection of the hands a device that I have used with success is a pair of old soft leather driving gloves which button rather high up on the wrists. The fingers are cut from the gloves close to the knuckles, and the hands and gloves are dipped into the water before starting to fish an ivy-infested lake or stream. If the gloves are kept wet, they do not become uncomfortably warm and they do afford substantial protection, in addition to shielding the backs of the hands from the scratches dealt by dead blackberry canes and live cat briers. A further very important measure is, immediately following a day in ivy-infested territory, to give the hands and other exposed parts a thorough scrubbing in hot water and soap, producing a thick lather and using a brush. Remember that especially vulnerable parts are the tender skin between the fingers and on the wrists, and hence to give these areas special attention. Occasionally, persons become sensitized to poison ivy to a painful degree, and in such cases only treatment with the poison extracted from the plant and *performed by a competent physician may give permanent relief.*

Even worse than the effects of poison ivy are those of the much rarer plant, the poison sumac sometimes also called poison elder (Fig. 3). This is a shrubby tree that almost invariably inhabits boggy woods. It looks quite different from the ordinary sumacs and its berries, instead of being red, are waxy white, borne in loose clusters that are pendant from a notch between the leaves. There are from 7 to 13 leaflets on the petioles, or stems, which usually are bright red. The beautiful wooden lacquerware made by the Japanese is finished with the varnish made from a closely related poisonous Asiatic plant.

The precautions taken against poison ivy are equally necessary and efficient against poison sumac, even though the poisonous effects of this plant are definitely more severe in character.

As this is being written comes the announcement in the journal Science, of the discovery by Schwartz, Warren and Goldman, of the United States Public Health Service, of an absolute protection against the poison of these plants—either sodium perborate 10 per cent or potassium periodate 2 per cent added to ordinary vanishing cream. It is rubbed thoroughly on all parts that may be exposed to the poison and is said to act by filling the pores of the skin but also by liberating nascent oxygen which neutralizes the poison of the plants. The actual formula is still to be announced, but it will be placed at the service of the public in the near future.

These, my brothers of the angle, are some of the more annoying of the woes to be encountered occasionally by the freshwater angler, and it is hoped that the foregoing discussion may help you to avoid or subdue them, but in any event let them not discourage you from going afishing, for as Izaak Walton says:

"Oh, Sir, doubt not that angling is an art; is it not an art to deceive a Trout with an artificial fly?—A trout! that is more sharp sighted than any Hawk you have named, and more watchful and timorous than your high-mettled Merlin is bold?—doubt not therefore, Sir, that but angling is an art, and an art worth your learning; the question is rather whether you be capable of

(Continued on Page 17)

DOMOWITCH HEADS BROOKSIDE CLUB

Edward Domowitch was elected president of the Brookside Sportsmen's Club of North Wilkes-Barre at the annual meeting of the organization. Other officers elected and installed were Vice-President Joseph Miscavage; Recording Secretary, Alex Lopata; Financial Secretary, Benjamin Antosz; Treasurer, John Gonska; Board of Trustees, John Koval, Stephen Lawryk, John Burry; Board of Comptrollers, John Terpak, Paul Monko, Felix Makravertz; Sergeant-at-Arms, Nicholas Tokach and Caretaker, Stanley Godlewski.

One of President Domowitch's first official actions was to appoint a committee of five to supervise definite plans for conducting the traditional annual "Sportsmen's Dance." The following dance committee members Edward Sobolewski, Felix Makravertz, Joseph Rusenko, Walter Gurdock and Nicholas Tokach acknowledged the responsibility thrust upon them and promised to break all previous social achievements thus far attained by the club.

In appreciation of the service rendered during the past year, the following officers were honored at a reception immediately after the general business session: President, John Terpak; Vice-President, Nicholas Rusenko; Recording Secretary, Alex Lopata; Financial Secretary, Benjamin Antosz; Treasurer, Edward Sobolewski; Board of Trustees, Leo Brady, Andrew Tershak, Michael Kucirka; Board of Comptrollers, Nicholas Tokach, Peter Buzink, Felix Makravertz and Sergeant-at-Arms, Peter Burry.

ANTI-POISON IVY CREAM

According to press reports, the U. S. Public Health Service has developed a vanishing cream that provides protection against poison ivy. To be effective, it must be applied on the face, hands and other exposed parts of the body that come in contact with poison ivy.

In making the cream 10 per cent sodium perborate is used, or 2 per cent potassium periodate. These two substances come in crystals, which should be ground into powder because the crystals will not mix with the cream.

The cream acts by filling the pores of the skin and forming a protective covering which prevents much of the ivy poison from penetrating the skin. As perspiration comes in contact with the vanishing cream in the pores of the skin a soap is formed, and in addition to washing the poison ivy off and out of the skin, the alkalinity of the soap liberates nascent oxygen from either the sodium perborate or the potassium periodate, which neutralizes the poison ivy.

CONTESTS FEATURE SCHUYLKILL MEET

Comments R. W. Angst:

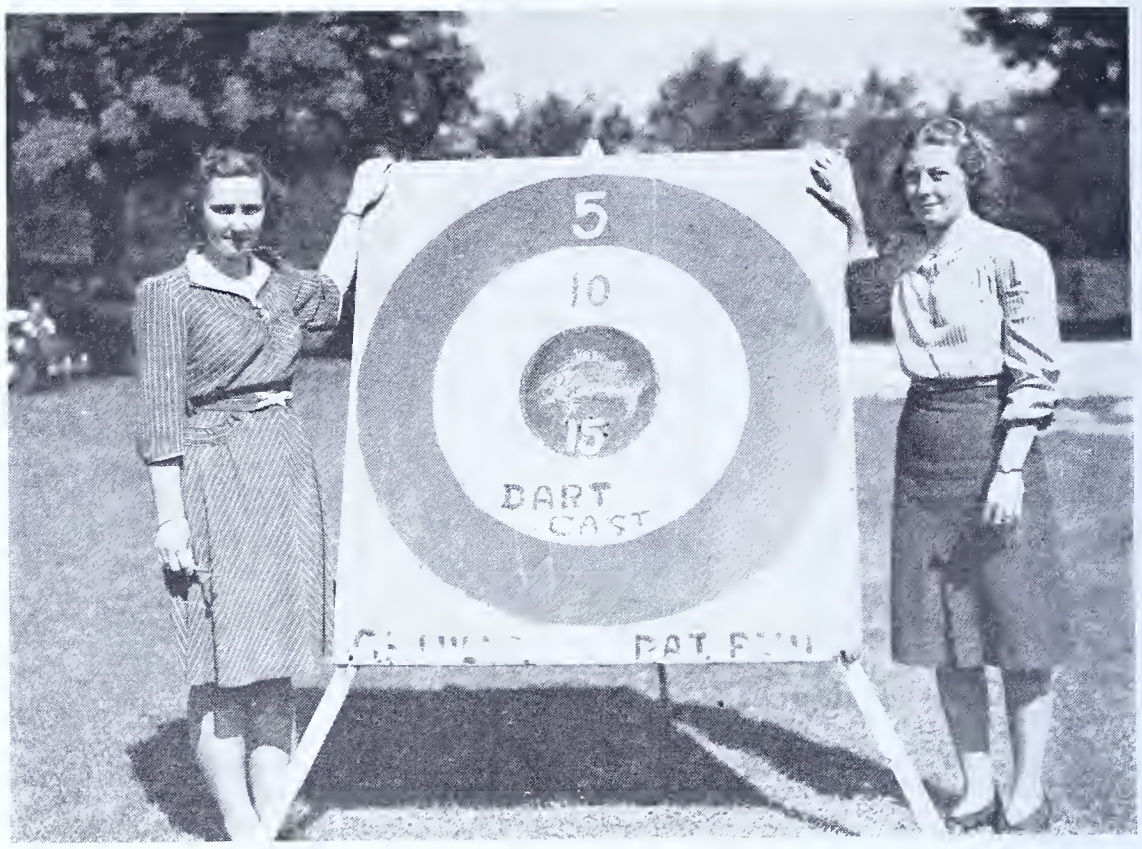
To describe the Schuylkill County Field Day and Fishing Contest in one article would be impossible, therefore we can only cover the highlights.

In the first place, the weather was all anyone could ask for but the assistance received to do the work required for such an affair was not what one would expect from a county organization. Less than one dozen men did all the work. That the treasury is not in the red is no credit to some of the instigators of the field day. Some of the boys crow a lot and they holler like the dickens if a stream is not stocked or they don't get an extra crate of rabbits but when it comes to work to get such things accomplished they have other dates.

But to get down to facts and if any of you readers expect to attend other trout fishing contests it will pay you to take special note of the following: First prize at the contest for largest fish taken was won by Matt Supreme of Shenandoah with a natural minnow. The winning trout was a splendid heavy 16¼ inch brownie. Mr. Supreme also won the prize for the greatest number of fish taken in the time limit with three trout in five minutes.

And right here it might be just as well to mention that it was surprising how many anglers paying fifty cents for the privilege of fishing five minutes released the fish they took.

Second prize for the largest fish taken was



The target for dart cast, a new game for anglers.

The casting rod works in ideally for dart cast, according to Clarence Miles, ardent West Chester angler who submitted these photos.

won by Andrew Przybilik, also of Shenandoah. Mr. Przybilik's first was a 15¾ inch brook trout taken on his own design of a streamer fly. The fly has a brown body, silver ribbed with gray bucktail for the streamer effect. It is practically the same as our previously described brown minnow and it appears in the water very much like a Jersey minnow. The same streamer produced a number of other strikes but only the one successfully hooked fish.

Third prize for largest fish taken went to "Farmer Brown" Walter Lucas of Ringtown. Farmer Brown took his trout on an Alcock spinner after "Tony" Lech, Schuylkill county Fish Warden, retrieved the lure from an apple tree and coaxed a dozen fishermen to use it. The landing of this fish was a scream. It first broke the farmer's leader and he had to take a sit-down position in the stream to land it by grabbing the remaining section of the leader. However, by the aid of a rod, hands and feet he got out his fish and he won with it, so there!

In the ladies class all prizes were won by Mrs. Joseph Matlavage, of Shenandoah, a lady whose picture you have probably seen in the ANGLER. Mrs. Matlavage is a real anglerette and she scored with two nice fat brook trout to cop all prizes awarded to the lady anglers.

The prize for the largest fish taken by a youngster under 16 or one who doesn't require a fishing license went to Jean Adams of Shaft who scored with some nice brook trout and a real one of nearly a foot.

Among the other successful anglers who had something to show for their fishing were Joe Matlavage of Shenandoah, Wallace Weigle, Mahanoy City, Shublic, of Shenandoah, and Dr. Walinchus and Paul Tregallis, of Mahanoy City, the last two of which were awarded the booby prizes for the least results.

In the trap shooting contest Mike Sweeney of Gilberton, finished first with 24 out of 25 and Tony Boxer, of Ringtown, second with 21 out of 25. Tony's gun is the same one that did the skunk shooting some time ago and Tony claims that he hasn't got them all yet.

We should devote the rest of our space to laud the ladies who so splendidly aided to make the field day a success, but since Mrs. Angst was one of them we'll pass over that quickly and say "thanks a million."

After that it is no more than right to praise the excellent service and the fine cooperation extended to the county association by the Shenandoah Fish and Game Association. To cover it quickly and simply it suffices to say that without them there would have been no field day or fishing contest.

CASTING TOURNAMENT

In spite of gusty winds some very fine scoring was done by a record entry at "Fish-O", the competitive casting game. Thirty-two entrants competed in two rounds of thirty casts each, these contestants journeyed from Buffalo, Geneva, Conneaut, Ashtabula, Edinboro and Erie to try their skill at casting "Fish-O" in shoulder to shoulder competition at the annual Field Day of the Erie County Sportsmen's League.

A prize list of twenty-one merchandise awards given by the American Fork and Hoe Company, The Shakespeare Company, The Erie County Sportsmen's League, The Erie Rod and Reel Club, The Palace Hardware Company, The Erie Sport Store, The Kraus Department Store and other interested individuals, proved to make the competition very keen as the following scores will indicate.

1st place—Clarence Quickel	Geneva, Ohio	57	45	Av.	51
2nd place—Jack Bishop	Buffalo, N. Y.	35	62	Av.	49
3rd place—Walter Allen	Buffalo, N. Y.	30	54	Av.	42
4th place—Royce Mallory	Edinboro, Pa.	39	35	Av.	37
5th place—Henry Noshay	Buffalo, N. Y.	31	42	Av.	37
6th place—William Curtiss	Conneaut, Ohio	26	46	Av.	36
7th place—Florence Stuitzer	Geneva, Ohio	35	35	Av.	35
8th place—Dr. M. L. Warner	Erie, Pa.	26	42	Av.	35
9th place—W. L. Weber	Erie, Pa.	29	39	Av.	34
10th place—Paul Perry	Geneva, Ohio	33	33	Av.	33
11th place—Henry Stuitzer	Geneva, Ohio	36	27	Av.	32
12th place—Jack Hersch	Erie, Pa.	28	34	Av.	31
13th place—Al. Hanson	Geneva, Ohio	30	31	Av.	31
14th place—Thomas McManus	Buffalo, N. Y.	38	23	Av.	31
15th place—Mrs. Walter Allen	Buffalo, N. Y.	15	45	Av.	30
16th place—Howard McManus	Buffalo, N. Y.	32	26	Av.	29
17th place—Roy Hersch	Erie, Pa.	20	37	Av.	29
18th place—Bob Perry	Geneva, Ohio	23	31	Av.	27
19th place—Earl Swartzman	Erie, Pa.	26	28	Av.	27
20th place—Ken Miller	Ashtabula, Ohio	29	24	Av.	27
21st place—William Schildmacher, Jr	Erie, Pa.	25	28	Av.	27
22nd place—William Allen	Erie, Pa.	8	44	Av.	26
23rd place—Don Brownell	Ashtabula, Ohio	18	32	Av.	25
24th place—R. Hyland	Conneaut, Ohio	24	23	Av.	24
25th place—Cecil Quickel	Geneva, Ohio	15	28	Av.	22
26th place—H. L. Olds	Conneaut Ohio	24	20	Av.	22
27th place—Leo Eaton	Conneaut, Ohio	21	21	Av.	21
28th place—Mary Malone	Buffalo, N. Y.	12	27	Av.	20
29th place—Nevin McKee	Erie, Pa.	20	17	Av.	19
30th place—A. M. Wooster	Buffalo, N. Y.	17	17	Av.	17
31st place—Mrs. M. L. Warner	Erie, Pa.	22	5	Av.	14
32nd place—A. H. Braggins	Erie, Pa.	2	3	Av.	3

Bronze "Fish-O" Merit Award Buttons were qualified for by Jack Bishop, Buffalo, New York, Secretary of the Buffalo Angler's Club who scored a 62, Clarence Quickel of Geneva, Ohio who scored a 57 and Walter Allen of Buffalo, New York, who turned in a score of 54.

The Erie County Sportsmen's League Field Day Meet is held annually at the League's Game Farm on Route 98 about 8 miles south of Fairview, Pennsylvania and is the outstanding sportsman's affair in this section. It is hoped that all who participated in the "Fish-O" event at this meet will attend again next year and bring their angling pals with them to enjoy this new pastime.

McFADDEN HEADS CAMBRIA CLUB

Reelecting John U. McFadden, Ebensburg, as president, and M. J. Farabaugh, Carrolltown, secretary, the Cambria County Sportsmen's Association at Ebensburg held a spirited discussion of the proposal submitted at the Pennsylvania State Federation of Sportsmen's Clubs meeting to increase the fishing license fee.

Delegates from the various clubs represented were instructed to secure an expression of opinion from their own clubs and report back at the next meeting. The sponsors want to add 50 cents to the existing license fee of $1.60 to be set aside for purchase of grounds to insure fishing rights. The Cambria County delegate voted for the increase at the state federation meeting, although the county association had not gone on record.

The sportsmen also discussed the killing of deer by dogs in Cambria County and voted to contact A. C. Ackerman of Altoona, enforcement officer for this district, to take steps for ridding the woods of dogs and compelling owners to license and control the animals. Scores of deer have been killed in the county, the sportsmen said, being run down by dogs, unable to escape by reason of the deep snow and several crusts of ice, through which the deer's feet sank, while the lighter dogs could travel atop the snow.

William Goodman of the Coopersdale Hunting and Fishing Club was elected delegate of the county association to the Pennsylvania State Federation of Sportsmen's Clubs, succeeding Joseph E. Shreve. Rheon C. Hassell of the Lorain Borough Sportsmen's Association was elected alternate delegate.

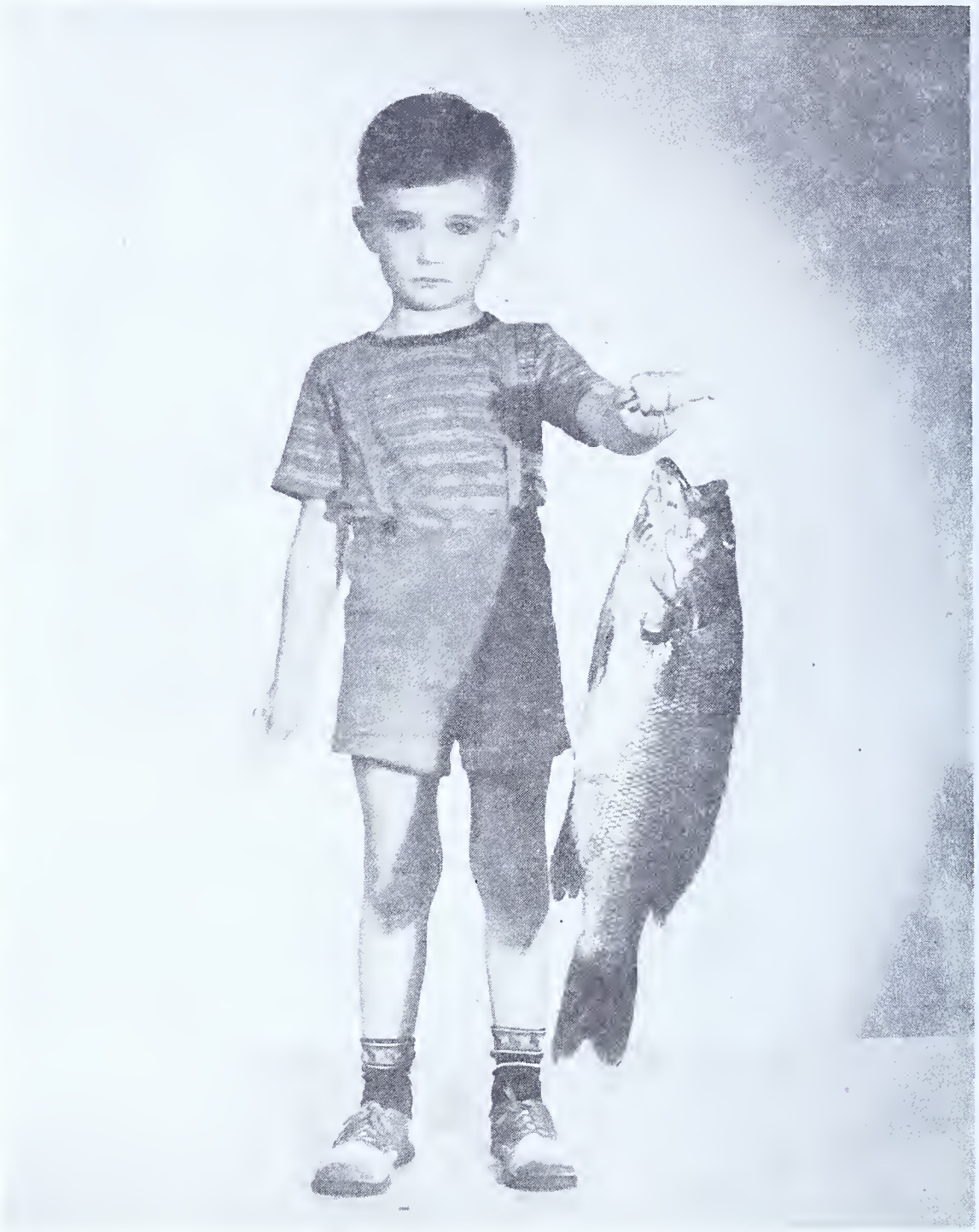
The meeting was attended by delegates from 24 of the 32 clubs in the county, the election having been postponed several months on account of lack of a quorum due to snow-blocked roads. The following clubs took part in the meeting.

Mossereek Rod and Gun Club, Cambria County Coon Hunters Association, Krayn Sportsmen's Association, Portage Sportsmen's Association, Coopersdale Horseshoe Hunting and Fishing Club, Johnstown Sportsmen's Association, East Taylor Sportsmen's Association, Carrolltown Rod and Gun Club, Bakerton Rod and Gun Club, Rocktown Hunting and Fishing Club, Hastings Sportsmen's Association, Lorain Borough Sportsmen's Association, Revloe Outdoor Life Club, Jamestown Rod and Gun Club, Ebensburg Sportsmen's Association, Wilmore Sportsmen's Association, Spangler Sportsmen's Association, Jackson Township Sportsmen's Association, Twin Borough Rifle Club, Barnesboro Rod and Gun Club, South Fork Sportsmen's Association, Cambria County Beagle Club and the Fourteenth Ward Hunting Club of Johnstown.

RECORD FISH

(Continued from Page 3)

The sign reads "Minnow" but don't believe it. It's one of the largest smallmouth bass taken in the state this year. Plugging scored this fine catch for Bob Ebitz of Pittsburgh in Pymatuning Lake in September. This big fish measured 21⅝ inches in length and tipped the scales at 5 pounds 2 ounces.



This smallmouth bass, one of the largest taken in state waters this year, was caught on plug in Harvey's Lake, Luzerne County, by Elmer Major of Trucksville, Luzerne County. His son, Jimmy, displays the catch, 21 inches in length and tipping the scales at 5 pounds 2 ounces.

H. O. Bidwell of Forty-Fort with his record 1940 walleyed pike. He took this 11 pound fish on a 4½ ounce rod, using a 24 pound test line.

October plugging at the point of juncture of the Loyalsock Creek with the Susquehanna West Branch in Lycoming county, yielded a fine 21½ inch largemouth bass weighing 5 pounds to William Rice of Montoursville.

Walleyes and Pickerel

Lake Wallenpaupack in Pike and Wayne counties entered the Pennsylvania fishing limelight again this year with a mammoth walleyed pike, 33 inches in length, 16½ inches in girth and weighing 11 pounds. This outstanding catch was scored in August by H. O. Bidwell of Forty-Fort.

To anglerette Martha Labar of Kingston goes the honor of having taken the heaviest pickerel reported this season. Miss Labar scored her catch in Mountain Springs Ice Dam, Luzerne county on July 14. The pickerel was 25½ inches in length and weighed 4 pounds 5 ounces. The lure on which it was taken was not given. Another fine pickerel, 25¼ inches in length was caught on the North Branch of the Susquehanna River at Laceyville, Wyoming county, by Adam Stine of Numidia. Weight of this fish was not given, however.

Muskellunge

Outstanding of the "water tigers" caught this year was the fine muskie taken on a live chub in Conneaut Lake, Crawford county, by C. W. McCready of Pittsburgh. This fish was 52 inches in length and tipped the scales at 33 pounds. McCready was assisted in scoring his record catch by Clyde Beers of Meadville.

Runner-up in the muskellunge division was a Shenango River fish measuring 42 inches in length and weighing 17 pounds 10 ounces. It was caught by Tom Brown of Clarksville on a home-made plug.

Other Species

The Susquehanna River at Shamokin Dam, Snyder county, yielded one of the largest eels ever reported to the ANGLER. This eel, 44 inches in length, tipped the scales at 7 pounds 11 ounces and had a girth of 9½ inches. It was taken by Fred Roush of Hummels Wharf.

Largest carp reported taken was caught by John Beilik of Kingston in the North Branch of the Susquehanna River at Tunkhannock, Wyoming county. This fish was 36½ inches in length and weighed 24 pounds.

Entered in the top division of brown trout reported this year was this 24 inch fish weighing 4 pounds 12 ounces. It was taken in Raymondskill Creek, Pike County, on opening day of the trout season by Frank Vandermark of Milford.

Beilik was using a 5½ ounce fly rod and an 8 pound test leader when he caught the fish.

FLY FISHING

(Continued from Page 6)

the rod should be lowered, so as to permit the line to slide forward through the guides with the least possible resistance.

There is hardly a limit to the length of line that can be shot on this forward cast. The writer with an ordinary fly rod has put out 140 feet, yet this distance is nothing compared to what some of the tournament men can do. The main thing is to get a line that will bring out every thing in the rod, and the best way to do this is to splice lines of various weights together until you get one that works. According to Jack Sparks: "The rig that will click is where you pick up 80 feet of line and shoot the rest. To pick up more line than this requires the most perfect knowledge of timing and power applications. If you are of light build, it may be best to pick up around 75. First get to 120 feet with ease, then begin to power 'em up plenty. Be as smooth and free of jerks as you can. Reach 'way back, and 'way for'ards and keep the rod in a straight groove back and forth." And Jack should know, for he holds the title of U. S. All Around Fly Casting Champion '37 and '38.

Miss Martha Labar with the 4 pound 5 ounce record pickerel for the year. She scored the catch in Mountain Springs dam.

HARK YE SANTA CLAUS!

(Continued from Page 9)

days, Christmas and the like. In the role of either donor or salesman, you'll be doing fish, fishing and fishermen a good turn; you'll be investing for both yourself, "they" and the sport a lasting dividend. If each present reader would secure a new reader, and then the convert in turn secure a convert himself next year, in a few twelve months every fisherman in the state would be reading the magazine—and it's his beholden duty to do so.

Again let's put the ANGLER into the hands of every licensed fisherman in Pennsylvania, twelve times each year—I'm willing to do my bit. Are you?

SOME SORROWS OF THE ANGLER

(Continued from Page 13)

learning it? for angling is somewhat like poetry, men are to be born so: I mean with inclinations to it, though both may be heightened by discourse and practice; but he that hopes to be a good angler must not only bring an inquiring, searching, observing, wit, but he must bring a large measure of hope and patience, and a love and propensity to the art itself; but having got and practiced it, then doubt not but angling will prove to be so pleasant, that it will prove to be like virtue, a reward in itself."

(Correction: Through error in the footnote of this article for November, the trade name for the commercial fly-dope mentioned was given as "Fly-Way." Correct name is "Stay-Way.")

Cummings Pond in Luzerne County yielded this first division largemouth bass for the year to Samuel Miller, Jr., of Swoyerville. Taken on plug, it weighed 6 pounds 3 ounces.

SCHRIVER OLDEST CUMBERLAND ANGLER

With one octogenarian and twenty-seven other veteran anglers over 70 years of age licensed, plenty of experienced fishermen lined choice Cumberland County streams when the trout season opened.

County Treasurer John H. Hobart, busy handing out the fishing licenses in the courthouse with the traditional last-minute rush, said that in addition to the real "old timers" who are over 70 years of age, more than two score licenses had been issued to men and women between 60 and 70 years of age.

To date, the title of being the oldest fisherman in the county goes to H. A. Schriver, 81, of Mt. Holly Springs, who for many decades has plied streams near his home not only for trout, but for other fish.

Most unusual of the group of veteran fishermen are Mr. and Mrs. J. P. Ditmer, of Boiling Springs, who brave all kinds of weather to go fishing near their home every day. Ditmer is 74 years old and his wife is 72, and despite their advanced age, the couple return daily from the Yellow Breeches Creek with more than mere memories of a pleasant trip.

S. S. Rupp, Shiremanstown attorney and the Rev. Dr. A. R. Steck, retired Lutheran clergyman, both 79 years old, anxiously anticipated the trout season opening. Both are ardent anglers, even though only a few months shy of being octogenarians. Another attorney who spends much of his spare time in the fields and streams is Thomas E. Vale, 74, of 170 West Louther Street, Carlisle.

Others who obtained licenses in Cumberland County are: John Trump, 76, of Mt. Holly Springs; E. Mode Vale, 72, of 509 North Hanover Street, Carlisle; William Ritter, 73, Carlisle R. D. 1.

DRAGO

THE BIOGRAPHY OF A DRAGONFLY

(Continued from Page 6)

with sudden alertness upon the other dragonfly. Drago's mother, guilty of attempted cannibalism, escaped.

After the last of the eggs was laid, Drago's mother looked old and battered. Her intricately veined wings were ragged, discolored, and worn down to but two-thirds of their original length. A whitish powder or bloom was faintly frosting her abdomen. She no longer haunted the swamp she had so enriched with life.

Far from the swampland she wandered, never to see Drago or any of his brothers or sisters. She wavered over the farmlands, following fence rows and hedges where late summer flowers were blooming. From the manner in which she would hold herself aloft above a cluster of flowers, a careless observer might believe she was seeking nectar from the asters and goldenrods. But her mouth parts, designed for shreading insects, would have made it impossible for her to sip the sweet juices should she have desired them. She had learned, however, that old and slow as she had become, she could still easily capture the flies and bugs that were half intoxicated by the syrups of the blooms. Each evening would find her hanging beneath a protecting limb or leaf, and as the nights grew more and more chill, it took longer each morning for the sun to warm her old joints and make it possible for her to lumber precariously above the old rail fence. Had a cold snap come, she would have starved to death, clinging to her shelter, for dragonflies are minions of the temperature.

And then one morning, with a few brisk snips of her yellow beak, a kingbird snatched Drago's old mother, neatly trimmed off the four wings as she flew nestward, and by the time they had fluttered to the ground, the old insect was being divided between two lusty young kingbirds.

The golden rods died. The young kingbirds learned to fly and spent their first winter in the South. Drago, before the sheet of ice covered the marshlands, crawled down his reed and buried himself in the deep black muck. He found a snug place to rest in the rootlets of a water lily bulb.

Shortly after the ice left in the spring, and before the kingbirds had returned North to build nests of their own, Drago had crawled out of his bed and returned to the bent reed that was only a little greener than he. Drago was hungry. Snails, tadpoles, and many more bullheads, even his younger brothers and sisters were rapaciously destroyed. Drago grew plump; six times during that spring he changed his skin for a larger, looser coat.

One morning just as the sun looked over the trees of the sandbar that lies like an arm of an hirsute giant between Lake Erie and the East Harbor, Drago was seized by a strange urge. It was something like the force that led him to bed in the water lily's rootlets just before the swamp was covered with the ice coat. But the urge he now felt was even stronger than that. The only desires of his short life had been to eat and sleep. This was different. Now something was compelling him to leave the endless soft twilight of his under-water-world to crawl into the harsh brilliance of that exotic existence that lay just above the surface. He clung to the marsh reed with his great eyes just through the water film. Something without him, below him, somewhere, seemed to push him on. He pursed his labium and labrum and climbed up and up into a strange current that buffeted his reed about. He had often watched the sun through the layers of water; then the face seemed mellow and benevolent. Now there was something terrifying in the heat that struck his body and dried the tiny swamp plants that had started to grow on his back. He gripped the reed more securely for the wind was waving it wildly. As the sun climbed higher, Drago regretted he had ever left the soft gloom of his first home.

And there were other causes of annoyance or even alarm. His skin was gradually but surely shrinking. Breathing was strange for a complete change in his respiratory system was in progress. Already there were several adult dragonflies skimming overhead; birds were congregating in the willows near the water's edge and clamoring with the frogs for an early breakfast. A great blue heron on his stilt-like legs would certainly have seen him had not the wind been blowing so briskly. It was a charming pastoral scene, but it offered no satisfaction to Drago. He seemed to sense that his cousins, cutting the air on their brittle, flashing wings, were as cannibalistic as he; that the frogs and birds would consider him, fat as he was, a most succulent morsel. Oh, why did he leave the calm and quiet of his water-baby world for the glare and confusion and heat of this sun-dominated place? But there was no return. Once beyond the margin of the water world . . . once a tracheal breathing apparatus has replaced the gills . . . no dragonfly can return to his aquatic existence. Drago could not retreat. He cringed whenever the bur-r-r of the dragonfly wings came near him; when the vast shadow thrown by a blackbird slid across him, he closed mental eyelids for he had no physical ones.

For an hour he clung and cringed and dug his toes so deeply into the reed that he couldn't have pulled them out again. Vaguely he was aware of an easing of the tenseness of his skin . . . yes . . . across his back, by the wing-pads, even across his eyes. He was tearing apart. But this was far from being disconcerting. He had changed his old uniform many times for a larger suit; he was confident that Nature would fashion him a new one before the old one would be discarded.

Gradually his thorax, trailing wet, drooping wings, pushed through the old skin. He extricated his large-eyed head from the old mask with some difficulty. Frequently dragonflies die of starvation because of their inability to escape from this mask which hardens grimly about the victim's eyes and mouth. But Drago escaped. When his head and thorax were free, he toppled backward from the old exuvial covering and caught hold of the reed again, immediately below the cast skin, with new appendages. For weeks afterward one might see the garment he had discarded swaying stiffly in the wind.

Another hour passed while amazing changes were wrought in Drago. The veins of his limp wings began to fill, and dark bands began to form patterns. The abdomen took on a definite tapering shape. Ever-deepening yellow spots began to glow.

His wings still wore their glassy, newly-unpacked look when he went for his first flight. There was no one to teach him to fly . . . He just flew! For suddenly, mirrored in the range of his huge compound eyes, was that long-legged heron, eager for just such a swallow as Drago would make. A dragonfly's eyes are a multitude of facets that are arranged to point in every direction. Did Drago receive two thousand facet pictures, or a composite impression, a mosaic, of the monster looming above him? Whichever it was, the stimulus was enough to send him up-up on unsteady wings, and then followed a long uneven glide that ended in an undignified clutching for support in a dark green stand of arrowroot. His next journey took him wavering over open water. Just below his glassy wings was his old home, lying green, dim, and inviting, yet something warned him not to attempt to return. He made an awkward landing on a broad lily pad, startling into flight a butterfly that was sunning itself.

As the sun rose higher and shone down warmly on the old East Harbor, Drago's flights became longer and swifter. Soon he was circling easily. He joined the savage play of the other dragonflies . . . chased and was pursued. He found it wise to stay outside the limits of the hunting grounds of the large green darners. Twice as he skimmed close to the smooth surface, admiring his graceful reflection, a long slim grass-pike leaped without warning from the submerged eel grass, and Drago escaped by millimeters.

Then came the first of the countless mosquitoes he later devoured. He was flying in typical dragonfly fashion; his six long legs were extended before him. Suddenly an unwary insect flew directly into the cup formed by his feet, and in less time than it takes to write, the mosquito found its way into the ever-active mouth with its cross-wise-working jaws. In his aquatic stages, Drago had attempted to eat anything less strong than himself. This habit carried over into adulthood. I must admit that his cannibalistic habits were continued occasionally, but infrequently when mosquitoes were numerous. By mid afternoon he had found a tiny pool almost surrounded by willows which he claimed as his own. He patrolled it vigilantly, and many a dragonfly, who attempted to enter, departed hastily with damaged armor.

Drago became an ardent sun worshipper. Nothing delighted him as much as gliding, spinning, soaring, and zooming in the hot beams from that friendly face. But when the sun hid behind a cloud for a time, and a sharp chill sprang up over the marshlands, Drago found flying a difficult task. To move his wings seemed to require more effort than he seemed to possess. The fluids that lubricated the joints of his body seemed to thicken and flying became laborious. So when the sun vanished, Drago would immediately fly to his favorite limb where he would cling well hidden by drooping willow leaves. There he would hang until the clouds

were gone, and liberating warmth again flooded the lowlands.

Night came to the East Harbor with a great moon that turned to quicksilver the water lying on the lily pads. Drago swung comfortably from his limb and thought of the amazing experiences of his first day. He recalled the combats, the escapes, the races, and the endless delicious titbits snatched from the air. He made plans for tomorrow when this cold silver disk in the heavens would be replaced by the genial sun. His plans were suddenly interrupted by a great black shadow that crossed the moon, and then glided noiselessly across the swamp. As it moved along, the wild ducks, coots and grebes, that were noisily feeding among the rushes, disappeared beneath the surface. Wherever the great horned owl and its shadow drifted, there was a sudden scurrying and then silence. Once a sharp scream that was abruptly silenced told of a wild thing that had been too slow. For a time the shadow affixed itself to a dead spur on Drago's willow . . . just below his shelter. Conquests were forgotten while that long-eared, curve-beaked monster gloomed just a few wing-lengths from him.

Later in the night, rain fell, and Drago, although accustomed to water in his baby world, found this most unpleasant. The slashing drops were cold and stinging. For a while the foliage was a protection, but soon the branches, the leaves, and Drago were dripping dismally.

When morning came again, and the broad friendly face of the sun looked over the old sand bar, Drago quivered with ecstasy. Soon the warmth would release him. The sun made diamonds of the drops on the willow, then drank them . . . and then, once again, Drago was free . . . Awing! Around . . . about . . . dashing . . . circling . . . he careened in a mad exuberance. The intoxication of it all sent him spinning up-up until his gleaming wings seemed to become a part of the sparkling dome overhead.

THE ANGLER'S NOTEBOOK

(Continued from Page 11)

discover a deep pocket out of which will flash a couple of fine fish if you approach a mite carelessly in your study.

See if somewhere along the shore of a woodsy pool the current has not eaten out the earth and hollowed a pocket where a trout or bass can lie in wait for food.

Get on the side of the stream opposite the one you usually travel in your fishing—and you may discover that you have been passing up the best spots and fishing the poorer ones just because you couldn't be sure, from a distance, which was naturally to be preferred.

If you are a fly fisherman, a study of the currents will be the most profitable part of your journey. Throw bits of twigs or paper on the surface, if you like, to gauge the movements of the water, and don't be startled if you discover that across eight or ten feet of water surface there are two or three currents of different speed. They are responsible for the bugaboo of dry fly anglers called drag.

Look at the bottom closely. See where rocks or sunken roots or other debris create ideal hiding places for fish. Notice, also, where signs of plant life indicate harboring places for larvae upon which fish feed.

And then, if you happen to make this study before next spring, go back over the grounds after the freshets of the early months of the year have passed. You probably will discover that ice and high water have caused certain important and worth-noting changes in the stream bed and contour. This is true, incidentally, whether the stream is large or small.

Spring waters have a habit of carving out channels where flats were before and of filling up what once were deep runs and of changing the depth and direction of riffles.

In the spring, too, be on the alert for signs of natural bait. You easily can observe minnows, and they are favorite foods of both trout and bass.

If you take the care, you also can detect signs of larvae which will produce nymphs and flies as the weather warms.

Always remember that a pool which is devoid of life in the early spring is a pool that is passed over by the fish as they get themselves located for the active summer feeding period. Obviously, then, they also should receive less attention from the angler.

If another personal experience be permitted, here is an illustration of what may happen if that final check-up is not made.

At the head of a long pool, in Lycoming Creek, a rocky shoal extends into the water across the stream from a moderately deep channel which usually produces good fish. Last spring a friend, visiting this pool with his eyes on the water across the way, walked carelessly to the location of the shoal, which was just under water.

As the familiar shelf of small rocks came into view a monster brown trout shot out from behind them and sped like an arrow across the stream toward deeper water.

"If I had known that fish was lying there, I'd have gone after it with the fly," my friend told me. "After the fish sped away, I looked at the shoal. I found that the trout had been lying in a fairly deep pocket upstream from the shoal. The pocket wasn't there the season before and evidently had been gouged out in the spring."

My friend would have taken that trout, in all likelihood, if he had mapped that spot in his mind previously. For that same evening he took three fine brown trout on a White Wulff within casting distance of the shoal. Not one, however, approached the size of the trout he had frightened into wild flight.

NEIGER REELECTED NORTHEAST CHAIRMAN

The Northeastern Division of the Federation of Sportsmen's Clubs, consisting of eight counties—Pike, Monroe, Wayne, Susquehanna, Wyoming, Carbon, Luzerne and Lackawanna—held an annual meeting at the Scranton Chamber of Commerce building, and reelected John L. Neiger, of West Scranton, chairman for the year of 1941. Neiger, who is also the president of the Lackawanna Federation of Sportsmen's Clubs, was renamed unanimously.

Benjamin Kane, of Susquehanna, was elected vice chairman, defeating Willard Quick, of Stroudsburg, by a very close vote. Robert Steventon, of Nesquehoning, was re-

Benedict J. Kane, prominent Susquehanna sportsman, who was elected vice chairman of the Northeast Division of the Pennsylvania Federation of Sportsmen's Clubs this year.

elected secretary of the division for the fifth term, and Henry W. Strohl, of Noxen, was elected treasurer to succeed Dr. F. S. Birchard, of Montrose, who expressed a desire to retire from office.

Ira Bleiler, of Palmerton, chairman of the by-laws committee, reported proposed changes and the delegates voted in favor of the changes.

It was unanimously decided as a matter of policy to oppose any special appropriation from the state fish fund under the present laws to be used for stream pollution enforcement. The organization members feel that this is the work of the sanitary water board. A recent recommendation for an appropriation for this purpose was recently ruled unconstitutional by Harrington Adams in the state attorney general's department. Sportsmen in general are opposed to any special appropriation from this fund for any purpose.

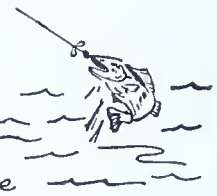
The division delegates also recommended that the fish commission adopt a policy of stocking lakes in northeastern Pennsylvania with small and large mouth bass in all state owned lakes and in other lakes and ponds where the owners will approve of this stocking and allow the public to fish on their waters.

TAKES FINE BROWN

Joseph Nelson, Jr., son of former District Attorney Joseph W. Nelson, of Greenville, took the laurels as the boss fisherman of the Mercer community when he landed a 20 inch brown trout out of the Pardoe Run, which weighed 3¼ pounds. The beauty was caught on a night crawler. The equipment was a fly rod, and the lucky fisherman had a lively battle before landing him.

A number of large ones were taken from this stream during trout season.

MIDDLE ATLANTIC ASSOCIATION OF CASTING CLUBS



An association of sportsmen's clubs formed to promote tournament casting, encourage organization among anglers assist in conservation; and support all moves toward true sportsmanship.

Branch Valley Fish, Game and Forestry Association

We had not had news for some time from this Association and our conjecture was that its members were not particularly active lately. When the Nominating Committee of the Middle Atlantic Association of Casting Clubs met recently, however, we learned that Ray Betts was right on hand to prove otherwise.

Delaware County Field and Stream Association

To this Association, Delaware County Game Protector Blair Davis recently gave an interesting talk on "Safety in the Fields" and on the "Weasel as a Predator." Following Blair's talk, Bill Wolf of the *Record* also talked to the club, congratulating it on its remarkable advancement in the short period of its existence.

Further recent news of this club is as follows:

(1) Celebrated Armistice Day by conducting Flag Raising exercises on the club site on Sunday, November 10th;

(2) Completed arrangements for additional regular meetings in the Norwood Fire Hall, to be held in the morning in order to accommodate those club members who are working at night—these meetings to be known as the "Owl's Club" meetings; and

(3) Set the date as December 21st for a "bang-up" trap shoot on the club's grounds, on Chester Creek above Dutton Mill Road. (This Association is a member of a circuit which also includes the Broomall Sportsmen's Club, the Tri-State Gun Club and the Delaware County Sportsmen's Club.

Plans are being made at the moment for Field Trials for setters and pointers, to be held some time in February or March. The club's trout rearing pond is at this time about one-third completed; and the club's archers are becoming active on the club site. The high power rifle range too, has been used to advantage in sighting in rifle in preparation for the 1940 bear and deer seasons. In fact, on Sundays there is usually a "waiting line" to use this range.

The club's pistol team has been doing its share in upholding the honor of the Association. For the second successive year, this pistol team defeated the pistol team of the Pennsylvania State Police from the Media barracks.

Dover Fishing Club of Philadelphia

The next regular meeting of this club will be on December 18th at 8:30 P. M. As usual it will be held in the club's assembly rooms at the Philadelphia Bourse Building on 5th Street near Market. Following the precedent of our November meeting this meeting will also be closed to members only. However, unlike the November meeting the club's business will be confined almost entirely to the election of officers for the fiscal year of 1941.

Dave Mazzoni and his entertainment committee have arranged with The Atlantic Refining Company for a complete evening's entertainment. Musical numbers, moving pictures, and educational experiments with your automobile engine will round out an evening of unparalleled interest. "Highlights of Football" on the screen will explain all the major trick plays used by the big college teams during the past season. Club members will have an opportunity to see the famous Ted Harmon of Michigan in action both at full speed and in slow motion.

One hundred percent attendance of the members is expected at this meeting. Election night is an important event to Dover members and each one should enjoy this privilege. Come out and vote, enjoy this unusual evening's entertainment, and don't forget the fisherman's lunch.

We're now on the last lap of the "Dover Prize Fish Contest." We can't give any secrets away at this time but some of the contestants are due for a big surprise when they find out that the little fish they entered won a prize. If you have been holding anything back, get it entered now, for there are some fine prizes to be won and it's not going to take such an extraordinary large fish to win them.

No fish were biting at the casting tournament—so Ernest Jenkins, left, and Walter Miesen, both of Narberth, took time out to do a little biting themselves. These men constructed the interior of the Lower Merion Rod and Gun Club's Indoor Rifle Range, which is a popular rendezvous during fall, winter and spring.

Willard Bowman, captain of the Dover Fishing Club's championship casting team, demonstrates the "follow through" in distance casting with the surf rod.

The question of club buttons was recently taken up at a director's meeting and now the secretary will be able to supply them at any of our meetings. These buttons are gold plated and show the Dover emblem in red and blue enamel, when worn on the lapel or the yachting cap they identify the member's affiliations and mark him as a real sportsman. Better get one.

Cod Fishing trips can be arranged throughout the winter months. If interested, get in touch with Doc Hankinson at once. General information about the Dover Fishing Club or any of it's activities may be obtained from the secretary, Mr. Robert Morris, 2728 West Montgomery Avenue, Philadelphia.

Gloucester County Game and Fish Association

The present national Trap Shooting Professional Champion, Fred Tomlin, is a resident of Gloucester County, New Jersey. It was in his honor that this Association set aside one of its recent meeting nights and designated it as "Fred Tomlin Night," on which Fred Tomlin was elected the first and only honorary life member of the Association. The business meeting was followed by a program of speeches by prominent trap shooting champions, moving pictures, a buffet supper and the presentation of a shooting jacket to the honor guest, Fred Tomlin himself.

At this meeting it was reported that the champion began his target career in Glassboro, New Jersey, where at the age of five years, he was the proud owner of an air rifle. From the air rifle, he graduated to a .22 and, at the age of fifteen years, he shot his first target with a shotgun. On this latter occasion, as Fred and other residents of Glassboro recall, Fred missed his first target but hit the second. In 1915 and in 1918 he won the New Jersey State Championship, and in 1920 became a professional shooter, after which he won numerous championships. Among them—in 1932 he won the world's open championship with 200 straight. In 1940, he again won this event, so that he is the only man who ever won the open championship twice. He also won the 16-yard championship five times; whereas, no

other Pro has won it more than three times. In addition to the above, Fred won the Pro Average for eight years, four times with world record averages, and made a world's record run for 714 straight on registered targets in 1938.

This Association is justly proud of its only honorary life member!

Holmesburg Fish and Game Protective Association

On the evening of December 9th in the Holme Library at Frankford Avenue and Hartel Street, this Association will hold another of its interesting Winter Season meetings. A moving picture and a speaker will be on hand to entertain, following the regular business routine.

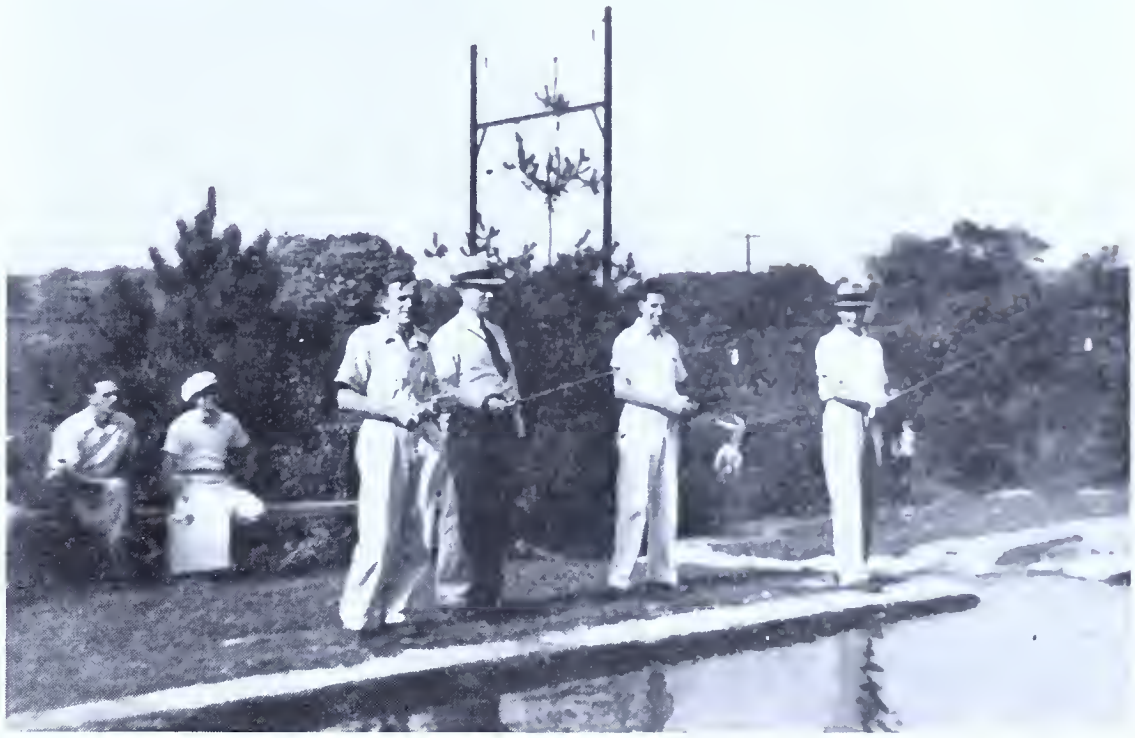
Lansdale Sportsmen's Club

We have learned that, interspersed among pictures of hunting and trap shooting, club member Fred Eurich of Line Lexington, entertained his fellow members with moving pictures which he took of Summer and Fall activities of his Club and of the MONTGOMERY COUNTY FEDERATION OF SPORTSMEN'S CLUBS.

On additional activities of this Club, we have various reports. Trap Shooting was quite popular on Saturdays while the fellows practiced for small and large game hunting seasons. And now that the small game hunting season has ended, the corn which John Ruth of Kulpsville brought home from the Husking Party on Judge Knight's property will be greatly appreciated by members of this Club who have tackled the problem of feeding game during the severe part of the winter.

Lower Merion Rod and Gun Club

Husking pegs—some of them family heirlooms, some well-worn and some the new streamlined ones—made their appearance when members of the Lower Merion Rod and Gun Club, as well as members of other member clubs of the MONTGOMERY COUNTY FEDERATION OF SPORTSMEN'S CLUBS, assembled one Sunday afternoon recently for a CORN HUSKING PARTY on the property of Hon. Harold G. Knight, near Red Hill, Pa. A large field of grain was turned over by Judge Knight to the Montgomery sportsmen, who, after picking and husking the corn, took it to their local clubs to be distributed as *feed for game* in their respective territories during the coming winter months. Montgomery County Game Protector Ambrose Gerhart, of Souderton, lead the husking party.



A group of Lower Merion Rod and Gun Club fishermen during a recent plug casting contest. Standing, left to right, Elmer Jenkins, Narberth, Clarence Burside, Paoli, Lloyd DuBois, Merion, and Raymond Jardine, Glenside.

Members of the Pennsylvania Fish and Game Protective Association as they took part in a recent casting tournament. Reading from left, Philip Blees of Philadelphia, Charles Hisler, Upper Darby, and Hobart Lavin of Media.

Skies were cloudy during the afternoon while the jubilant band of huskers unsheathed golden ears of grain. But it was not until just before dark that rain finally fell in Red Hill and the huskers breathed sighs of relief; for their work was done, the grain was stored safely in their cars and they were ready to commence their homeward trips.

This grain is intended to be distributed on open hunting ground during winter months, when snow and ice make it difficult for wildlife to procure food. Members of the Lower Merion Rod and Gun Club, as well as of the other member clubs of the Montgomery County Federation, wish to express sincere appreciation to Judge Knight for his generosity in presenting grain to the sportsmen for this purpose.

Montgomery County Fish, Game and Forestry Association

General business routine occupied the entire evening on the occasion of the last quarterly meeting of this club, held in October at the office of Adolph Muller in Norristown. An interesting program and a *venison* supper are being planned for those who attend the next quarterly meeting, to be held in January.

This club's Forestry Committee Chairman, E. F. Brouse—who is also Montgomery County District Forester under the Pennsylvania Department of Forests and Waters—requested hunters to observe several simple rules for the prevention of field and woods fires during the hunting seasons. He recommended that they do not smoke while moving about in the woods and fields, but that they take "time out" when they smoke and, before proceeding to hunt, that they properly dispose of matches, cigarettes, cigars, etc. For a *tremendous toll of game and wildlife in general* is taken each year by *fires,* he reported.

Pennsylvania State Fish and Game Protective Association

Excellent motion pictures on the work of several of the State fish hatcheries were presented to this Association—and accomplishments as well as future plans of the Fish Commission were outlined, when J. Allen Barrett, a new member of the Board of Fish Commissioners, addressed a recent meeting of this Association in the Academy of Natural Sciences in Philadelphia.

During the meeting, too, fifty new members were taken into the Association; and, following the meeting, motion pictures of the club's Fall Outing, of Trout Fishing in Idaho, of Duck Shooting, Pheasant Hunting and Dog Training were also shown.

President Edgar W. Nicholson, of Ardmore, officially presented to the Association the plaque won during the past summer of the Association at the Third Annual Tournament of the MIDDLE ATLANTIC ASSOCIATION OF CASTING CLUBS, through the splendid casting of the following members of this club: Barney Berlinger, George DeGorgue, Raymond Neirle, Charles Stocker, Joseph Vandergrift and Edward Weigeman.

Perkiomen Valley Sportsmen's Association

When the MONTGOMERY COUNTY FEDERATION OF SPORTSMEN'S CLUBS husked corn recently on Judge Knight's property, Raymond Landis and his son,

Left to right: William Dur and William Enocks, of the Holmesburg Fish and Game Protective Association, as they appeared in a recent casting tournament.

Robert, as well as Howard Horrocks, were present to represent the Perkiomen Valley Sportsmen's Association and to procure grain with which to feed game in their territory during winter months ahead. These men reported that their fellow club members were grateful for their share of the field of corn which was donated to the sportsmen by Judge Knight for this purpose.

Royersford Hunting and Fishing Association

Members of the Royersford Hunting and Fishing Association also expressed appreciation to Hon. Harold G. Knight for the corn which he turned over to the Montgomery sportsmen for Winter feeding of game in their territory.

President Irvin Clemens and his son were on hand to participate in the Husking Party, as was Donald Meyer, Secretary of the Royersford Club. Irvin proudly displayed his father's husking peg—an unique piece of workmanship in hand carving and as "Irv" put it, "one that has served nobly at many husking bees!"

WEST CHESTER ANGLERS COMPETE AT OUTING

A good time was had by all at the Annual Outing of the West Chester Fish and Game Association, held at Lenape Park. Considerable interest was shown in the various events, resulting in keen competition for prizes.

In addition to the three beautiful trophies offered as prizes (a gold trout mounted on a base for the winner of the fly casting accuracy contest; a gold bass mounted on a base for the winner of the plug casting contest for accuracy; and a large silver trophy as Grand Prize to the contestant making the largest number of points in the various events), silver and bronze medals were awarded other winners.

Many members entered the contests, and the winners were as follows:

Fly Accuracy

Place	*Name*	*Trophy*
1st	Brinton Ross	Gold Trout
2nd	Wm. Bodulich	Bronze Medal
3rd	Harry Singer	Hunting Knife

Fly Distance

1st	Brinton Ross	Silver Medal
2nd	Wm. Bodulich	Bronze Medal
3rd	Harry Singer	

Plug Accuracy

1st	Raymond Cooper	Gold Bass
2nd	Horace Pyle	Silver Medal
3rd	Brinton Ross	Can Auto Oil

Plug Accuracy

1st	Harry Singer	Silver Medal
2nd	A. Montgomery	Bronze Medal
3rd	Horace Pyle	

Dart Casting

1st	Raymond Cooper	Silver Medal

The large silver trophy for the Grand Prize was awarded to Brinton Ross, who made the most number of points in all contests.

Two hundred tickets were given the kiddies for use on the various amusements.

Everyone voted the Outing a huge success.

LIVE BASS CONTEST IN WESTMORELAND

Twenty-six bass were landed in three contests by anglers who participated in the fishing events at the Sportsmen's Picnic, at Idlewild Park near Ligonier.

The fishing was done in the small lake and all bass caught were thrown back into the lake after being measured.

Half-way through the contest a moment of silence was called for in respect to the memory of the late Welty Dom, an ardent sportsman, whose death occurred several months ago. Mr. Dom had served as one of the judges at the fishing contests for several years.

There were 47 entries in the Fishermen's Jackpot contest in which ten bass were hooked and landed.

The largest bass landed during the day was a 17-inch bass caught by William Nicol.

Results of the various contests were as follows:

Event No. 1 — Westmoreland County Sportsmen's Association members only. 5/8 oz. tournament plug accuracy. Fishermen's equipment:

1st—R. Kimmell, 92 score.
2d—Bob Kimmell, 88 score.
3d—S. G. Warrick, 85 score.

Event No. 2—Allegheny County Sportsmen's Association members only. 5/8 oz. tournament plug accuracy, fishermen's equipment:

1st—C. D. Anderson, 93 score.
2d—R. Brughbaugh, 88 score.
3d—C. J. Mutz, 87 score.

Event No. 3—3/8 oz. weight accuracy:
1st—K. Breightbaugh, 95 score.
2d—F. Rutledge, 90 score.
3d—C. W. Ward, 88 score.

Event No. 4, 5/8 oz. plug accuracy:
1st—K. Breightbaugh, 94 score.
2d—C. J. Mutz, 92 score.
3d—F. Rutledge, 91 score.

Event No. 5—Dry fly accuracy:
1st—K. Breightbaugh, 94 score.
2d—S. J. M. Vonfeld, 87 score.
3d—Vincent Pierce, 85 score.

Event No. 6—Wet fly accuracy:
1st—C. W. Ward, 98 score.
2d—K. Breightleigh, 97 score.
3d—J. M. Vonfeld, 96 score.

Event No. 7—Fly fishing for bass contest:
1st—Fred Compton, 16¼ inch bass.
2d—Harry Beebar, 16¼ inch bass.
3d—Barr Baker, 13½ inch bass.
4th—K. Breightbaugh, 13 inch bass.

(There were eight bass hooked and landed in the fly fishing contest.)

Event No. 8—Plug fishing contest for bass:
1st—Bob Lawson, 16½ inch bass.
2d—William Nicol, 16 inch bass.

Honor guests and speakers at the 16th annual banquet of Tarentum District Sportsmen's Club held in Brackenridge Heights Country Club recently. Seated (left to right) Fred McKean, member of the Fish Commission, Attorney Hale Hill, Tarentum, toastmaster, Sheriff John Heinz of Allegheny County, County Commissioner John S. Herron, also former mayor of Pittsburgh, and Jesse L. Humes, president of the Tarentum Club. Standing, W. A. Miller, Emlenton, secretary Armstrong County Sportsmen's League and a county commissioner, John G. Mock, Pittsburgh Press outdoors editor, C. B. Phillis, president, Allegheny County Sportsmen's League, Harris G. Breth, radio commentator and outdoor columnist for the Pittsburgh Sun-Telegraph, who was principal speaker, and Ray McKissick, Armstrong County game protector.

Stream improvement work on Quadis Run near McCall's Ferry, Lancaster County.

TROUT RAISING TALK AT SHEFFIELD CLUB

An informal talk by Alfred Riley, fish culturist in charge of the federal government's newly built trout rearing station on Farnsworth Run, Cherry Grove township, was a feature of the regular monthly meeting of the Sheffield Rod and Gun Club, held in the American Legion Home.

Mr. Riley described how the young trout, all of which are shipped to the rearing station from government hatcheries, are taken care of at the Farnsworth establishment. He cited some interesting facts about their habits and rate of growth.

The fish, less than an inch in length when received, are kept in the rearing ponds until they are three or more inches long, when they are removed and stocked in suitable streams of the district. More than 24,000 of the fingerling brook trout recently were so stocked, Mr. Riley informed his listeners, adding that more will be stocked by fall, including approximately 50,000 each of brown and rainbows.

Mr. Riley was introduced by A. K. Daniels, club president.

Announcement was made that the petition for incorporation of the club is ready for presentation before the county court, with the presentation expected to be made within the next few days.

It was also announced that the executive board had appointed D. E. Kinney fourth vice president to succeed Oral Goode, who has moved away.

SAUCON CLOSED TO SUCKER FISHING BEFORE APRIL 15

Conservation-minded sportsmen, through individual contact with property holders, closed the Saucon Creek, a tributary to the Lehigh River in Northampton County, between Keck's dam above Hellertown and the Bethlehem Steel plant, to all fishing and bait-taking until the opening of the trout season on April 15, 1940.

The action taken by the sportsmen in Bethlehem and Hellertown was only made after repeated warnings to fishermen, under the guise of sucker anglers, had failed. It was claimed that many trout were caught and not returned to the water.

Under the fish code the season on trout does not open until Monday, April 15. In fairness to the law abiding fishermen, the campaign of contacting the land owners along the Saucon Creek was made.

Fishermen who disregarded the action taken by the sportsmen were subject to prosecution under the trespass act. Property-holders on both sides of the Saucon Creek consented to such a course in order to prevent the law-violating anglers from taking trout in the stream before the season opened.

Similar action has been made to close the Monocacy Creek, another tributary to the Lehigh River in Northampton County, as it flows through the parkway in the City of Bethlehem.

STOCKING DISCUSSED AT LAWRENCE MEET

Over 350 attended the meeting of the Lawrence County Sportsmen held in the V.F.W. Hall on East Washington Street. George Sillman, president of the association conducted the meeting.

Many important topics were up for discussion. The club will sponsor a movement to ask the Fish Commission to stock the Slippery Rock Creek with brown trout and the Lehigh Quarry with carp. It was also planned to buy bass for the Neshannock Creek but the other clubs will be asked to go along with this project.

The recent fine banquet was again discussed and the chairmen of the various committees gave their reports. The president discharged all committees and thanked them for their fine work.

Sillman asked that the fishermen try to respect the fish laws and also respect the farmers' property during the coming fishing season. He also warned those starting fires along the creeks to keep them under control at all times. At Wampum the refuge lost over 2,000 small pine trees due to the carelessness of someone.

The meeting was concluded by the showing of sound techni-color films by J. E. Byers from the Canadian National Railways which were enjoyed by everyone. Over 75 new members were taken into the association.

CROSS WINS AT CLINTON SHOOT

The third annual shoot of the Western Clinton Sportsmen's Association at the Elks Country Club was a successful affair with a large attendance including many visitors from distant points.

Shooting events started early in the morning and continued until dark.

George Cross, fish warden, won the championship award as high scorer in all events.

Blue Rock winners were George Cross, first; Swanson of Philipsburg, second; Cooney of Harrisburg, third; Jacobson of Philipsburg, fourth; Bowman of Renovo, fifth; Hilcman of Kittanning, sixth; Polmgreen of Philipsburg, seventh; Johnson of Philipsburg, eighth.

Pistol winners—Cross and Allen Keller tied at 296 out of 300, Keller losing to Cross in the shoot off. C. Cross and Krebes tied at 292 out of 300 and were awarded duplicate prizes. Samuelson of Williamsport, scored 291 out of 300.

George Cross was first in skeet with De Forest second and M. C. Coleman, third.

Gate prizes were drawn as follows: Mrs. Dalton Bell of Williamsport—.22 rifle; Joseph Smith of North Bend—fishing rod and Mrs. Parden Haskins—electric fan.

Plugging in the Susquehanna River at Harrisburg yielded this fine 30 inch walleyed pike to R. D. Mackey of Lemoyne this year. It tipped the scales at 6½ pounds.

FOREST FIRES RUIN FISHING

Mr. Alex P. Sweigart,
Editor, PENNSYLVANIA ANGLER,
South Office Building,
Harrisburg, Pa.
Dear Mr. Sweigart:

I am enclosing a photograph illustrating a point which, I feel, should be brought home to all trout fishermen. It shows the East Branch of Millstone Creek in Elk County during the July hot spell. At the time this picture was taken—July 25, 1940—the temperature of the water was also recorded. The running water was checked and rechecked at 83°F.

The picture amply illustrates the dangerously low level of the water and the scoured condition of the stream bed. Fortunately, most of the streams within the Allegheny National Forest are in much better condition than this one. There can be no doubt but that the adverse conditions, herein illustrated, of stream bed disturbance, low water, and high temperature, are the result of severe and repeated burning of almost the entire watershed.

Forest Service records show that no important fires have occurred here since 1926 and further inquiry has revealed that the severest fires occurred during 1908, long before the Allegheny National Forest was established. The disturbance wrought by these fires is indeed long lasting, especially as it has affected water tables and run-off.

The restoration of this stream to its former status of brook trout water presents a very serious problem. Time alone seems to be the only sure cure, a span of time within which the fire-scarred slopes may once more regain their mantle of forest cover and shade.

During the 1939 drought this stream and Salmon Creek, in Forest county, were the only streams within the National Forest which became so low as to endanger fish life. A glance at the burned area map quickly reveals the reason. Our intensive fire protection is saving many a stream from a similar fate.

The East Branch of Millstone is stocked annually with fingerling trout in the headwaters and legal trout near Loleta, but stocking is expensive and uncertain, and at best is somewhat of a temporary expedient.

The condition of this stream, the East Branch of Millstone Creek at Muddy Fork, vividly portrays the effects of a badly burned watershed. When this picture was taken in July the water temperature registered 83 degrees Fahrenheit.

The Pennsylvania Fish Commission, the U. S. Forest Service, and the U. S. Fish and Wildlife Service are cooperating to make better fishing in these waters, but a more widespread public realization of the sinister effect of forest fires on fishing conditions, it seems to me, is of paramount importance in helping reach the goal we are all striving to attain.

As watershed conditions improve through public backing of fire prevention measures, the results of fish stocking and stream improvement work are bound to be more lasting.

The State and Federal hatchery raised fish are intended to restock depleted waters and to supplement natural reproduction. The inability of many of our streams to support natural reproduction of trout is largely attributable to adverse watershed conditions. Good forestry practice improves watershed conditions, which in turn improve and maintain good fishing conditions. To me this relationship is so self-evident that I sometimes wonder why we should have any fisherman-caused fires. Most fishermen are reasonably good sports and surely they would not intentionally kill the goose that lays the golden egg. Perhaps we are all to blame for not giving the subject more prominence.

Additional prints of this or other pictures may be had on request.

Very sincerely yours,
R. F. HEMINGWAY,
Forest Supervisor,
U. S. Department of Agriculture
Forest Service

TARENTUM CLUB DINNER SUCCESS

With 300 sportsmen and their ladies in attendance, the 16th annual banquet of Tarentum Sportsmen's Club in Brackenridge Heights Country Club was the most successful of these annual affairs held by the club.

The program set a new high for brevity, without any sacrifice in quality. Harris G. Breth, radio commentator of the Radio Sportsmen's League and columnist for the *Pittsburgh Sun-Telegraph*, was the principal speaker. He gave those in attendance a splendid talk which was received with a thunderous ovation.

There was only one other speaker, John S. Herron, Allegheny County commissioner and former mayor of Pittsburgh. Always received with favor by local audiences, Mr. Herron briefly complimented officers and members of the Tarentum Club for their splendid year-round programs and expressed pride in the fact that he is one of its members.

Attorney Hale Hill was toastmaster and he handled his assignment with aplomb. Numerous notables were present and were introduced, but there were no other speakers. They included John G. Mock, *Pittsburgh Press* outdoors editor; Armstrong County Commissioner Walter Miller, of Emlenton, who is also president of Armstrong County Sportsmen's League; C. B. Phillis of Pittsburgh, president of Allegheny County Sportsmen's League; Ray McKissick, Armstrong County game protector; Sheriff John Heinz of Allegheny County, and Fred McKean, of New Kensington, a member of the fish commission.

Archie Eppley of Marysville with two big scale carp he landed this year in the Susquehanna River.

Mr. Breth made a plea to sportsmen to take every opportunity to acquaint the public with sportsmen's problems so that needed legislation will win sufficient public endorsement to secure its passage. He also urged rehabilitation of state streams, damaged by the flood of 1936 to the extent that years will be required for natural restoration, so that natural facilities for fish breeding will be restored, rather than depending entirely upon stocking by the fish commission.

Mr. Breth also touched upon the game problems, citing that the steady growth of the state's deer herds has caused a shortage of food for small game. He urged a program of cutting one acre out of each 20 acres of state woods so that brush and berry vines would be permitted to grow to provide small game food and also cover for winter shelter and breeding.

"The public must understand the 'whys' of hunting and fishing problems before the legislators will pass needed legislation and it's the duty of every sportsman to take every opportunity to acquaint every friend and neighbor who is not a sportsman what is needed to provide better hunting and fishing facilities," he said.

After the dinner and speaking program, which was concluded by 9:45, there was a fine program of entertainment. Johnny Myers was master of ceremonies for the program provided by Pittsburgh Lodge No. 46, Loyal Order of Moose. Ollie Letzkus, well-known Pittsburgh tenor, Ruth Henneman in songs and dances, Hank Whitehouse in dance specialties and Moose Rhythm makers were featured.

One sportsman empties cans at the truck, one snaps the picture, two carry, two empty and two watch as 30,000 trout are transferred from the Pleasant Mount hatchery truck to Six Spring Ponds of the Lackawanna sportsmen on a cold and blustery day in early April.

Casting Tournament Success at Charleroi

The Charleroi Sportsmen's Association held its first tournament since its affiliation with the N.A.A.C.C. on Sunday, August 11, 1940. This was a registered tournament and so far as we know it was the only one in our state for some reason or other. Had we known it at the time we would have made it for the state championships, the club secretary writes.

This is really quite an undertaking for so small an outfit as we have but due to a lot of hard work we made a success of it. The merchants of the community gave us encouragement and backing to the best of their ability. Some of the prizes consisted of dinnerware sets, blankets, tackle boxes, table lamps, chenille spreads (for the ladies), electric toasters, and any kind of fishing tackle you wanted. All in all our prizes were very good. Some of the contestants were surprised at the really fine display on hand.

A total of five events were run off in rapid fire order beginning at 10:00 A. M. First on the list was to be no exception as the air was moving at a rapid pace. This event was finally taken by Clyde Marshall of East Liverpool, Ohio, the Ohio State fly champion. He has since won the National Distance Championship.

The second event was the wet fly which was won by Carl Breitenbaugh of the Pittsburgh Casting Club. This was won with a score of 96 which is plenty good in any league.

The third event was the ⅜ ounce accuracy and this was won by Harry Lowe with an excellent score of 95. This score surprised us local men as we had made the course a very tough one to negotiate, several of the targets being placed around 70-80 feet.

The fourth event on the program was the ladies ⅝ ounce accuracy which was won by Mrs. C. Marshall of East Liverpool, Ohio. She has since won the women's national championship at St. Louis. This will give you an idea as to the type of competition our women were up against but they all acquitted themselves admirably, this being the first time in competition for many of them. One thing about this event was that they couldn't lose as we had ten entries and also ten prizes.

The fifth and final event was the men's open ⅝ ounce accuracy which was the really tough event for the day as it always is. Competition was really keen, what with five various State and National Champions competing for first place. However, Lee Ganier of Washington, Pa., was one of our locals who would not be daunted and won with a score of 96 while his teammate Lou Fuller of the same place placed second with a score of 95 and that was that.

This will give you a rough idea of the type of competition one runs into in this tournament casting game. However, they are all swell fellows and willing to give the beginner all the assistance they can. This type of sport is rapidly coming to the front at last. It is fun and is not expensive as I have found out. A line which costs 60¢, and a few plugs at 20¢ are practically all the expense connected with the sport itself. The women enjoy it as much as the men and some of us had better watch our steps if we want to hold on to our family championships.

The Club Championships were won this year by Hugh Shipe in the men's division and Mrs. S. H. Crawford in the women's division. However, we will be after their scalps come next April and they will have to step as we have new men and girls who are rapidly showing improvement.

SPRINGDALE CLUB COMMITTEES NAMED

J. C. Fritz, president of the Springdale Sportsmen's Club, has appointed a number of committees for the ensuing year. The Building and Life Time Membership Committee is headed by George Hawk, and has for its secretary-treasurer, T. D. Montgomery. Other members are H. H. Liepertz, E. H. Spix, H. J. Clowes, F. X. McCulloch, H. W. Brown, Carl Mellon and Frank Mitchell.

E. J. P. Berger leads the Boy Scout committee, aided by J. J. Legrand, T. D. Montgomery, E. H. Spix, F. X. McCulloch and Charles J. Bartek.

The Movie Committee has for its chairman B. G. Hubner, assisted by Joseph Ziomek.

A. G. Anderson heads the Game and Fish Prize Committee and his aides are W. H. Lentz, L. I. Libby and H. H. Grey.

The Junior Organization Committee has for its chairman, C. R. Cochran. H. W. Brown, Joseph Ziomek, J. C. Fritz and Elwood Sutch are assistants.

The Refreshment and Entertainment Committee is chairmanned by Homer Phillips, aided by Frank Schultz and W. H. Lentz.

The officers are J. C. Fritz, President; Henry Grey, Vice-president; A. G. Anderson, Recording Secretary; J. J. Martinek, Financial Secretary; B. G. Hubner, Treasurer; W. H. Lentz, County League Delegate, T. D. Montgomery, Alternate County League Delegate and the two year Directors, John Shaw and F. H. Spix.

The directors of the organization are T. D. Montgomery, George Hawk, F. X. McCulloch, John Shaw, E. H. Spix, J. C. Fritz, A. G. Anderson, B. G. Hubner and H. H. Grey.

Plans are being made for a fish fry.

ELECT OFFICERS

The annual meeting for election of officers for Conneautee Range was held at the Range at which time the following officers were elected for the ensuing year: Thomas S. Seelar, President; William Holquist, Vice-President; Howard E. Gilbreath, Secretary; Elera J. Hanes, Treasurer; William Holquist, Trustee; Eric M. Bohn, Trustee and Wilfred Dean, Trustee.

The club has a limited membership, and is devoted to outdoor sports, and planting is done to promote the propagation of wild game, while a 10 year reforestation plan was inaugurated this year with several thousand evergreen seedlings being planted as a starter.

Oil City Waltonians cleaning their trout ponds.

STOCKING COMMITTEE NAMED IN LEHIGH

A federation fish committee to assist District Fish Warden C. Joel Young in the stocking of State fish in Lehigh County was named by Forrest B. Kiefer of Alburtis, president of the Federation of Sportsmen's Clubs in Lehigh County.

One member was appointed from each of the clubs in the federation, as follows:

William Knauss of 712 Green St., Allentown, Pioneer Fish and Game Protective Assn.; Ernest Bush, Alburtis, Alburtis Rod and Gun Club; Dewey Lentz, Slatington, R. 1, Slatington Skeet and Sporting Assn.; Alton R. Snyder, New Tripoli, Ontelaunee Rod and Gun Club.

Donald E. Baumer, Emmaus, Unami Fish and Game Protective Assn.; M. O. Knauss, Catasauqua, Catasauqua Sportsmen's Assn.; Paul J. Knerr, Coopersburg, Saucon Rod and Gun Club, Coopersburg; Roy Rader, 816 Tilghman St., Lehigh County Fish and Game Protective Assn.

Charles Moyer, Macungie, Macungie Rod and Gun Club; Dalton Romig, Schnecksville, Copeechan Fish and Game Club, Schnecksville; Samuel Eisenhart, Trexlertown, Rural Sportsmen's Assn. in Upper Macungie Twp.; Marcus Kemmer, Limeport, Milford Fish and Game Protective Assn.; Vernon Lewis, Slatedale, Slatedale Rod and Gun Club; John W. Beitler, Allentown R. 2, Cedar Creek Fish and Game Protective Assn.; John H. A. Snyder, Zionsville R. 1, Milford Gun and Rifle Assn.

MONTOUR CLUB HAS SPLENDID PROGRAM

An exceptionally well rounded program in conservation is being carried through this year by the Montour County Fish and Game Conservation Club at Danville. Early last spring, the club released approximately 600 ringneck pheasants and trapped 75 rabbits from a preserve, releasing them on public hunting grounds throughout the county. Extensive restocking has been carried on during the past two years, according to Fred E. Kindig, secretary. At the beginning of the year, the club had a membership of 303 and last winter many of these members were engaged in game feeding, building shelters and feeders throughout the county. Streams were to be restocked this year with bass and catfish.

The club's president this year is Frank Watson, Danville; Vice-President, Charles W. Mausteller, Danville and the treasurer, C. LeRoy Kehl, Danville.

CRAWFORD SPORTSMEN PLEDGE AID TO FBI

Services of the Crawford County Branch, Sportsman's Council, in combatting fifth column and other un-American activities have been offered to the government "in whatever way it desires."

Action along this line was taken at the last meeting of this organized group of sportsmen numbering more than 1,700 members. The Council's resolution, a copy of which was mailed to the federal bureau of investigation, directed that proper authorities be notified of "any movement that we might contact" of suspected fifth-column work.

This meeting also voted to commend the Pennsylvania Game Commission for its 1940 hunting season regulations, particularly the open season on both male and female deer, and heard reports that 400 six-week-old ringneck pheasant chicks have been placed in various holding pens at Meadville, Conneaut Lake, Cambridge Springs and Saegertown.

Reports that Biologist Potter of the Pennsylvania Fish Commission had made a thorough survey of Crawford County trout waters at request of the Council, were received.

Principal activities of the Council this summer have been the second annual banquet, held at Titusville, in June, and the second annual boxing show at Sportsmen's Bowl, Conneaut Lake. Sponsored as a conservation benefit, this show featured eight bouts between amateur boxers and listed two Crawford County boys, Ralph Butcher of Meadville and Joe Popieski of Titusville, in the main event.

Also outstanding was the August meeting held at the Titusville Chapter Clubhouse on August 25, in conjunction with the annual picnic of the host chapter, which is one of 14 community units affiliated with the county organization.

GREASING THE FLY

Suggests Roy Angst of Pottsville: We are about to grease a dry fly after a trout has drowned it or messed it up on us. Our implements are a box of paste form such as muscelin and a blotter. The fly we use ourselves usually gets greased a bit as we start to fish it but with a well made fly that isn't

Charles Rider and Cal Breneman of Windsor with their fine catch of walleyed pike scored this year at Conowingo Dam.

absolutely necessary. The fly we expect to grease here has been mussed or will not float well anymore.

The first operation is to get all blood and slime off the fly and that of course is done in the water by letting it sink and dragging it a bit up and down. It is then false cast until most of the water flies from it. Sufficient false casting will usually dry it completely, making the use of the blotter unnecessary but the blotter does a quicker job better.

With the fly dry and we mean dry we proceed with the greasing. Remember grease and water don't mix therefore the emphasis on dryness. Now take a little mucelin between the fingers and rub it a bit to soften it. After it is soft work it well into the hackle. Be sure to get some on the body and on all the hackle. Fluff out the hackle by blowing on them and straighten them well with the fingers. The whole job is not complicated and doesn't take long. It requires very little grease and a little goes a long way when using mucelin.

After greasing, a few false casts will fluff out the hackle still more and the dry fly angler is continually casting as he moves along in order to keep his fly dry and fluffed out.

The three warnings necessary to greasing a fly are: the fly must be dry to start with, a little grease goes a long way, and keep the grease off the leader if you wish it to sink. Don't touch a leader with greasy fingers. Wipe them on the line or your pants if you must wipe them somewhere.

SET LINERS FINED

Adolph Klimovich and John Yalch, Mocanaqua, Luzerne County, were arrested early in the morning on June 15 at Beaver Lake, charged with using set lines.

They were fined $20 and costs upon entering a plea of guilty before Justice of the Peace Joseph Siegfried, Hughesville.

The defendants were allowed to post bond to insure payment of the fine and costs.

The arrests were made by Carl A. Bidelspacher, fish warden, and Jesse Newcomer and Robert Latimer, game protectors.

Archie Eppley, Jr. of Marysville scored this fine catch of suckers and rock bass in the Susquehanna River this season.

Mrs. Frank Noble of Lewistown with two fine Tuscarora Creek smallmouth bass. Each of these fish measured 17 inches in length and tipped the scales at three pounds. Photo by Harry Baumgartner, special fish warden, of Lewistown.

HOPE TO MAKE BUFFALO CREEK A BASS STREAM

The summer and early fall phase of the year's program of the Tarentum Sportsmen's Club was discussed at some length at the monthly meeting of the club in Malta hall, Tarentum.

As the work of the club has been placed under several divisions with counselors in charge of each type of conservation work carried on by the club a large part of the evening was given over to a report of these counselors. These reports told of the progress made by each group in carrying out their projects and discussed the plans for the future. As the counselors had met the evening previously a number of new plans and suggestions were submitted for the consideration of the club members.

One of the most interesting reports was that on game conservation made by Wilson Keebler. He stated that their group has planted a number of grape vines and nut tree seed on fields near town for birds and small game. He also announced that great success was being met in having farmers and others plant a feed cover mixture in their field as a conservation measure and stated than an additional 10 pounds of the mixture had been secured and would be distributed to those who will plant it on their property. Later in the meeting it was voted to send a personal letter of appreciation from the president of the club, Raymond Anderson to those farmers and others cooperating in planting of this seed and to enclose an honorary membership card.

A report on the work of the fish group was given by John Dufford.

He reported that plans for work on Buffalo Creek to fit it as a bass stream were progressing. In this connection it was announced that a number of samples of water from both the Little and Big Buffalo Creeks had been tested and found satisfactory for bass. The result of these tests will be sent to the Fish Commission at Harrisburg. Efforts are being made to have Buffalo Creek stocked and made a bass stream.

FISHERMEN FINED

Two Centre County fishermen were fined a total of $140 and costs for illegal catches of trout. The two pleaded guilty to the charges at a hearing before Squire Harold Cowher of Bellefonte.

Tarrill Lucas, 24, Bellefonte, was arrested on Benner Run by wardens Dave Dahlgren and Sam Reed. His ne of $80 and costs resulted from possession of five trout under the limit of six inches, and three fish over the limit of 10.

Elmer Davis, Bellefonte, R. D., paid $60 and costs for having six trout under the six-inch limit. Davis was also arrested on Benner Run.

Formation of junior sportsmen clubs is always good news for the ANGLER. Here's extending best wishes to a successful year for the recently organized Blandburg Junior Sportsmen Association at Blandburg, Blair county. The club started with a membership of 45 and Jack Davis of Blandburg was elected president, according to Warden Link Lender.

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HERE AND THERE IN ANGLERDOM

West Side Camp No. 231 of the United Sportsmen of Pennsylvania at Larksville has been carrying through an active conservation program this year, according to word received from the secretary, Vincent Sitko. Recently, members assisted in stocking bass in Harvey's Lake, Luzerne county.

A fine catch of brown trout was scored on fly in Mill Creek, Clarion county, on June 22 by R. E. Hepler of Dayton, Pa. Hepler's catch of eight brownies ranged in length from 9 to 14 inches.

Those brushy mountain streams yield some mighty fine trout for the careful fisherman who doesn't mind on occasion dunking a worm or fishing a cricket or grasshopper. We recently had a report from R. J. Barton of New Cumberland that he caught a fine 15 inch brown trout in one of those streams during the past trout season. The catch was scored on a worm in Little Mountain Creek, Cumberland county.

Lake Wallenpaupack each year yields some splendid specimens of the largemouth bass. While plugging in the lake last season, Ernest Laudenslager of Allentown took a 20 inch largemouth that tipped the scales at an even five pounds.

One of the finest largmouth bass reported this year was this 20 inch 5 pound fish taken on plug in Lake Wallenpaupack by Ernest Laudenslager of Allentown.

Bart Snyder of Allentown reports a splendid catch of calico bass and one pickerel on minnows in Lake Wallenpaupack this season. Nine big calico bass were in the catch.

Two Juniata County anglers of the first water were hoping that this year, when the bass and walleyed pike season opened, they'll be able to duplicate the late season catches they scored last year. Tuscarora Creek yielded a largemouth bass to George Knisely of Mifflintown that measured 19 inches in length and tipped the scales at 3 pounds 14 ounces. This extremely well conditioned bass sported a girth of 14 inches and is ample evidence of what a good food supply can do in producing fish well up in the poundage rating. Thorne Kennedy of Mifflintown scored his catch immediately below the bridge at the Juniata County seat. It was a walleyed pike, measuring better than 23 inches in length and weighing 3 pounds 4 ounces.

Writes Charley Nehf, whose fine column "Field Sports" is a feature in the *Allentown Morning Call:* "The following information is credited to Harvey Neff, this city—Clarence Armbruster, Allentown, made two record catches of fish within an equal number of days. While fishing in the lower Jordan, Mr. Armbruster caught a 22 inch brown trout weighing two pounds 14 ounces. Now that's a big trout for anyone, but wait. The next day he took a grandad carp. The silver carp was 24 inches long and weighed 8 pounds 8 ounces."

If by any chance, one of our readers who fished Brush Creek in Bedford county during the past season found a knife answering the following description, its return to the owner Shirley Hulse of Bedford will be greatly appreciated. The knife in question had a single, sword edge blade, a stag handle and when opened was about 9 inches in length. It was lost on Brush Creek at a point about a mile above the mouth of the stream at Travelers Rest.

Central Pennsylvania fishermen watched with interest the taking of fish from a pond near Duncannon, Perry county, for restocking of Sherman's Creek in that area during the summer. In construction of the state highway, the contractor was about to effect a fill-in, involving a large body of backwater located between the highway and river just south of Duncannon, and Fish Warden Frank Sanda of Steelton was notified. Members of the Keystone Sportsmen's Association had brought the matter to the attention of the Commission. Eight men, a truck and a number of large cans were supplied by the contractor to the warden for the work of fish removal. Netting, which required the better part of the day, yielded between eight and ten thousand fish of the following species: 1500 smallmouth black bass, some weighing as much as 3½ pounds, 2,000 small pickerel, hundreds of walleyed pike, yellow perch, sunfish, suckers and carp, and an even larger number of bullhead catfish. The fish were restocked in Sherman's Creek which has its point of juncture with the Susquehanna River near that point.

Small mountain trout streams occasionally produce surprise catches of fine trout such as this 15 inch brownie taken last season in Little Mountain Creek, Cumberland County, by R. J. Barton of New Cumberland. It was caught on a worm.

Plugging in the Susquehanna River in the vicinity of Harrisburg yielded one of the largest walleyed pike reported in that section of the state this year to R. D. Mackey of Lemoyne. The big fish, taken on August 1, measured 30 inches in length and tipped the scales at 6 pounds 8 ounces. Mackey was plugging from a boat near the west end of the railroad bridge when he scored the catch.

CHRISTMAS EVE WITH FISHERMAN FLIP

Pennsylvania ANGLER

Extends Christmas Greetings

To Our Readers

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